ENVIRONMENTAL ASSESSMENT

DOI-BLM-CO-040-2016-0003 EA

Renew Grazing Permit on the Dry Hollow Reservoir Gulch, Middle Mamm, Couey 1, and Couey 2 Allotments.

Prepared by:

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LOCATION.

The Dry Hollow Reservoir Gulch (No. 08127), Middle Mamm (No. 08128), Couey 1 (No. 08115), and Couey 2 (No. 08118) Allotments are located south of Silt, Co in Garfield County.

LEGAL DESCRIPTIONS.

- **Dry Hollow Reservoir Gulch Allotment (No. 08127)**: Township 7 South (T7S), Range 92 West (R92W), Sections 28, 31-34, and Township 8 South (T8S), Range 92 West (R92W), Sections 3-10, 15-18.
- **Middle Mamm Allotment (No. 08128)**: Township 7 South (T7S), Range 93 West (R93W), Sections 26, 35-36, and Township 8 South (T8S), Range 93 West (R93W), Sections 1-2.
- **Couey 1 Allotment (No. 08115)**: Township 7 South (T7S), Range 93 West (R93W), Sections 24-25.
- **Couey 2 Allotment (No. 08118)**: Township 7 South (T7S), Range 93 West (R93W), Sections 34-35.

PURPOSE AND NEED FOR ACTION.

These permits/leases are subject to renewal or transfer at the discretion of the Secretary of the Interior for a period of up to ten years. The U.S. Bureau of Land Management has the authority to renew the livestock grazing permits/leases consistent with the provisions of the Taylor Grazing Act, Public Rangelands Improvement Act, Federal Land Policy and Management Act, Colorado River Valley Resource Management Plan Amendment, and the Colorado Public Land Health Standards.

The mission of the BLM is "to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations". Land Health Standards and Guidelines for Livestock Grazing Management were developed between the BLM and the Colorado Resource Advisory Council to ensure that the mission of the BLM will be achieved.

This action is needed to determine whether or not to renew a grazing permit/lease and if so under what terms and conditions to ensure that Public Land Health Standards and objectives for resource management are or will continue to be achieved.

SCOPING AND PUBLIC INVOLVEMENT AND ISSUES.

This action was scoped internally with the NEPA Interdisciplinary Team on October 22, 2015. Issues raised during the internal scoping are itemized in table 6 and analyzed in the Affected Environment and Environmental Consequences sections of each resource or resource use.

The Colorado River Valley Field Office Internet NEPA Register lists grazing permit renewal NEPA documents that have been initiated. They are generally posted approximately one or two

months prior to the estimated completion date. The public is provided an opportunity to comment through the Internet NEPA Register.

PROPOSED ACTION.

The Proposed Action is to renew a grazing permit with the following terms and conditions. A term and condition will be added to the permit that would place the summer schedule on Dry Hollow Reservoir Gulch in temporary suspension until an allotment management plan (AMP) can be completed and appropriate infrastructure installed that would make the summer use feasible. The AMP would include additional fencing, existing pond maintenance, and potential new water sources to hold livestock on the allotment and out of riparian areas. Previously suspended AUMs would be cancelled. The permit will be issued for a 10-year period, unless the base property is leased for less, but for purposes of the EA we are assuming 10 years of grazing by this or another applicant (in case of transfer). The proposed action is in accordance with 43 CFR 4130.2. Scheduled grazing use, grazing preference, and terms and conditions for the proposed grazing permit are summarized below in Table 1 and Table 2.

Table 1. Proposed Grazing Schedules.

Operator Name	Auth. No.	Allotment & Number	Pasture	Livestock No. & Kind	Begin Date	End Date	% BLM Land	AUMs
Couey Family LLLP.	0504797	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	268 Cattle	06/01	06/15	100	132
		Middle Mamm (08128)		112 Cattle	06/03	06/30	100	103
		Couey 1 (08115)		2 Cattle	05/01	05/31	100	2
		Couey 1 (08115)		2 Cattle	10/16	11/15	100	2
		Couey 2 (08118)		87 Cattle	06/20	10/19	5	17
Robert Wheeler	0507662	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	90 Cattle	06/01	06/15	100	44

Table 2. Allotment Summary AUMS.

Operator Name	Auth. No.	Allotment & Number	Active AUMs	Suspended AUMs	Temporary Suspended AUMS	Permitted Use
Couey Family LLLP.	0504797	Dry Hollow Reservoir Gulch (08127)	132	0	229	361
		Middle Mamm (08128)	103	0	0	103
		Couey 1 (08115)	4	0	0	4
		Couey 2 (08118)	17	0	0	17
Robert Wheeler	0507662	Dry Hollow Reservoir Gulch (08127)	44	0	0	44

Terms and Conditions.

1. An actual use report shall be submitted annually to the BLM office no later than 15 days after livestock have been removed (i.e. the grazing end period on the bill or permit/lease).

2. Adaptive management will be employed on the allotments. The BLM will allow up to 14 days of flexibility in the start and end dates on this permit depending on range readiness. Livestock use different than that shown above must be applied for in advance.

3. Maintenance of range improvements is required and shall be in accordance with all approved cooperative agreements and range improvement permits/leases. Maintenance shall be completed prior to turnout. Maintenance activities shall be restricted to the footprint (previously disturbed area) of the project as it existed when it was initially constructed. The Bureau of Land Management shall be given 48 hours advance notice of any maintenance work that will involve heavy equipment. Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site.

4. The permittee/lessees and all persons associated with grazing operations must be informed that any person who injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the

immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until further notified in writing to proceed by the authorized officer.

5. As provided by the 2015 Colorado River Valley Field Office Record of Decision and Approved Resource Management Plan, all public motorized and mechanized travel is limited to designated routes. Grazing permittees will maintain Administrative Access specifically for livestock operations and maintenance activities, as follows: 1. motorized access on designated routes that are closed to public motorized use; 2. motorized access in areas seasonally closed to public motorized use; and 3. motorized access off designated routes (e.g., fence maintenance). Administrative access is valid for grazing administration only and not for other purposes such as four-wheeling or big game hunting.

6. Upland average utilization levels by livestock should not exceed 40% on key grass species during the critical growth period and 50% during the dormant season. Grazing in riparian areas should leave an average minimum 4-inch stubble height on key species at the end of the grazing period and utilization should be no more than 30% use of current year's growth on woody species. If utilization is approaching allowable use levels, livestock should be moved to another portion of the allotment, or removed from the allotment entirely for the remainder of the growing season. Application of this term may be flexible to recognize livestock management that includes sufficient opportunity for regrowth, spring growth prior to grazing, or growing season deferment.

7. Salt/mineral block and supplemental feed will be placed a minimum of 0.25 mile and preferably 0.5 mile from riparian areas and other water sources, including springs.

8. For permit number 0504797, the 229 AUMs on the Dry Hollow Reservoir Gulch Allotment are placed into temporary suspension until an AMP can be developed that would improve fencing and water availability on the north east portion of the allotment were cattle could be adequately managed and land health standards can still be met.

Other Grazing Use Currently Authorized. Other grazing permits currently exist on the Dry Hollow Reservoir Gulch and Middle Mamm Allotments but are not being renewed at this time. They are included as part of the analysis.

Table 3. Other Existing Grazing Permits.

Operator Name	Auth. No.	Allotment & Number	Pasture	Livestock No. & Kind	Begin Date	End Date	% BLM Land	AUMs
Duke Wheeler	0505157	Dry Hollow Reservoir Gulch (08127)	Alkali Creek	10 Cattle	06/01	6/30	100	10
Shidelerosa LLLP	0505176	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	315 Cattle	06/01	6/15	90	140

Operator Name	Auth. No.	Allotment & Number	Pasture	Livestock No. & Kind	Begin Date	End Date	% BLM Land	AUMs
		Middle Mamm (08128)		29 Cattle	06/01	6/30	100	29
Record Ranch	0507625	Dry Hollow Reservoir Gulch (08127)	Reservoir Gulch	140 Cattle	06/01	06/15	100	69
Ben Shideler	0507712	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	285 Cattle	06/01	6/15	90	141
		Middle Mamm (08128)		28 Cattle	06/01	6/30	100	28

NO ACTION ALTERNATIVE.

The No Action Alternative would involve reissuing the grazing permit with the following existing terms and conditions. The permit will be issued for a 10-year period, unless the base property is leased for less, but for purposes of the EA we are assuming 10 years of grazing by this or another applicant (in case of transfer). This action is in accordance with 43 CFR 4130.2. Scheduled grazing use, grazing preference, and terms and conditions for the renewed grazing permit are summarized below in Table 4 and Table 5.

Table 4. Existing Grazing Schedules.

Operator Name	Auth. No.	Allotment & Number	Pasture	Livestock No. & Kind	Begin Date	End Date	% BLM Land	AUMs
Couey Family LLLP.	0504797	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	268 Cattle	06/01	06/15	100	132
		Dry Hollow Reservoir Gulch (08127)	Dry Hollow	57 Cattle	6/16	10/15	100	229
		Middle Mamm (08128)		112 Cattle	06/03	06/30	100	103

Operator Name	Auth. No.	Allotment & Number	Pasture	Livestock No. & Kind	Begin Date	End Date	% BLM Land	AUMs
		Couey 1 (08115)		2 Cattle	05/01	05/31	100	2
		Couey 1 (08115)		2 Cattle	10/16	11/15	100	2
		Couey 2 (08118)		87 Cattle	06/20	10/19	5	17
Robert Wheeler	0507662	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	90 Cattle	06/01	06/15	100	44

Table 5. Allotment Summary AUMS.

Operator Name	Auth. No.	Allotment & Number	Active AUMs	Suspended AUMs	Temporary Suspended AUMS	Permitted Use
Couey Family LLLP.	0504797	Dry Hollow Reservoir Gulch (08127)	363	95	0	458
		Middle Mamm (08128)	106	5	0	111
		Couey 1 (08115)	4	0	0	4
		Couey 2 (08118)	18	0	0	18
Robert Wheeler	0507662	Dry Hollow Reservoir Gulch (08127)	44	34	0	78

Terms and Conditions.

1. To promote health of native perennial vegetation, average utilization levels by livestock should not exceed 50% by weight on key grass species, and 40% of the key browse species current year's growth at the end of the growing season. Application of this term may be flexible to recognize livestock management that includes sufficient opportunity for regrowth, spring growth prior to grazing, or growing season deferment.

2. Grazing in riparian areas by livestock will leave an average minimum 4-inch stubble height of herbaceous vegetation and will not exceed an average utilization of 40% of the current year's growth for browse species. Livestock will be moved to another portion of the allotment where utilization levels are still within acceptable limits or removed immediately from the allotment when the above utilization levels occur.

3. Salt/mineral block and supplemental feed will be placed a minimum of 0.25 mile and preferably 0.5 mile from riparian areas and other water sources, including springs.

4. Adopt a rotational grazing system or reduce the period of grazing use so riparian areas do not receive 4.5 months of grazing during the growing period for the Dry Hollow Res Gulch Allotment.

5. Maintenance of range improvements is required and shall be in accordance with all approved cooperative agreements and range improvement permits. Maintenance shall be completed prior to turnout. Maintenance activities shall be restricted to the footprint (previously disturbed area) of the project as it existed when it was initially constructed. The Bureau of Land Management shall be given 48 hours advance notice of any maintenance work that will involve heavy equipment. Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site.

6. The permittee and all persons associated with grazing operations must be informed that any person who injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until further notified in writing to proceed by the authorized officer.

NO GRAZING ALTERNATIVE.

Under this alternative the grazing permit described in the Proposed Action would be cancelled. As a result, no grazing would be authorized on the Couey 1 and Couey 2 Allotments. Other existing permitted use on the Middle Mamm and Dry Hollow Reservoir Gulch Allotments would continue to be authorized. This alternative would initiate the process in accordance with 43 CFR parts 4100 and 1600 to eliminate grazing on these allotments and would amend the Resource Management Plan.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL.

No other alternatives were considered.

PLAN CONFORMANCE REVIEW.

The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3).

Name of Plan. Colorado River Valley Field Office Record of Decision (ROD) and Approved Resource Management Plan (RMP) (BLM 2015).

Date Approved. June 2015.

Decision Number/Page/Language.

- Livestock Grazing Management. Decision Number GRZ-GOAL-01. Page 68.

  Apply flexible and sustainable livestock grazing, in accordance with BLM Colorado Standards for Public Land Health and Guidelines for Livestock Grazing Management to contribute to local economies, ranching livelihoods, and the rural western character integral to many communities.

- Livestock Grazing Management. Decision Number GRZ-OBJ-01. Page 68.

  Meet the forage demands of livestock operations based on active use, by providing approximately 441,600 acres for livestock grazing, and provide approximately 35,500 AUMs of livestock forage.

RELATIONSHIP TO STATUTES, REGULATIONS, OTHER PLANS.

- Taylor Grazing Act of 1934 as amended;
- Federal Land Policy and Management Act of 1976;
- Public Rangelands Improvement Act of 1978;
- Title 43 of the Code of Federal Regulations Subpart 4100 – Grazing Administration;
- Noxious Weed Act of 1974;
- Endangered Species Act of 1973;
- National Environmental Policy Act of 1969;
- Migratory Bird Treaty Act of 1918;
- National Historic Preservation Act (16 USC 470f);
- Archeological Resources Protection Act;
- Native American Graves Protection and Repatriation Act;
- Indian Sacred Sites – EO 13007; and
- Consultation and Coordination with Indian Tribal Governments – EO 13175
- Colorado Public Health Standards and Livestock Grazing Management Guidelines -March 1997

STANDARDS FOR PUBLIC LAND HEALTH.

In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The five standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

A Formal Land Health Assessment was conducted in the Divide Creek Watershed in 2009 which included the Dry Hollow Reservoir Gulch, Middle Mamm, Couey 1 and Couey 2 allotments. The allotments were considered to be meeting all the standards at the time of the assessment. Dry Hollow had localized issues with water flow patterns, active pedestalling, gully formation and pinyon-juniper encroachment. Dry Hollow and Middle Mamm Creek were rated as being in proper functioning condition in 2009, but Dry Hollow was downgraded to functioning-at-risk with a downward trend in 2015.

The impact analysis addresses whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for each of the five standards. These analyses are located in the program-specific analysis in this document.

DIRECT AND INDIRECT EFFECTS, MITIGATION MEASURES.

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain environmental elements. Not all programs, resources or uses are present in the area, or if they are present, may not be affected by the proposed action and alternatives. Only those elements that are present and potentially affected are described and brought forth for detailed analysis (Table 6).

Table 6. Programs, Resources, and Uses (Including Supplemental Authorities).

Programs, Resources, and Uses (Including Supplemental Authorities)	Potentially Affected?	
	Yes	No
Access and Transportation		X
Air Quality		X
Areas of Critical Environmental Concern		X
Cadastral Survey		X
Cultural Resources	X	
Native American Religious Concerns	X	
Environmental Justice		X
Farmlands, Prime or Unique		X
Fire/Fuels Management		X
Floodplains		X
Forests		X
Geology and Minerals		X
Law Enforcement		X
Livestock Grazing Management	X	
Noise		X
Paleontology		X
Plants: Invasive, Non-native Species (Noxious Weeds)	X	
Plants: Sensitive, Threatened, or Endangered	X	
Plants: Vegetation	X	
Realty Authorizations		X
Recreation		X
Social and/or Economics	X	
Soils	X	
Visual Resources		X
Wastes, Hazardous or Solid		X
Water Quality, Surface and Ground	X	
Water Rights		X
Wetlands and Riparian Zones	X	
Wild and Scenic Rivers		X
Wilderness/WSAs/Wilderness Characteristics		X
Wildlife: Aquatic / Fisheries	X	
Wildlife: Migratory Birds	X	
Wildlife: Sensitive, Threatened, and Endangered Species	X	
Wildlife: Terrestrial	X	

CULTURAL RESOURCES

AFFECTED ENVIRONMENT.

Grazing authorization renewals are undertakings under Section 106 of the National Historic Preservation Act. During Section 106 review, a cultural resource assessment (CRVFO#1016-5) was completed for the Couey 1, Couey 2, Middle Mamm, and Dry Hollow Reservoir Gulch Allotments on February 12, 2015 by Erin Leifeld, Colorado River Valley Field Office Archaeologist. The assessment followed the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, and IM-CO-01-026. The results of the assessment are summarized in the table below. Copies of the cultural resource assessments are available at the Colorado River Valley Field Office archaeology files.

Data developed here was taken from the cultural program project report files, site report files, and base maps filed at the Colorado River Valley Field Office as well as information from General Land Office (GLO) maps, BLM land patent records, and the State Historic Preservation Office (SHPO) site records, report records, and GIS data.

Table 7 is based on the allotment specific analysis for the four allotments in this EA. The table shows known cultural resources, the potential of Historic Properties, and Management recommendations.

Table 7. Cultural Resources Assessment Summary

Allotment Name and Number	Land Status	Acres Inventoried at a Class III level	Acres NOT Inventoried at a Class III Level	Percent Allotment Inventoried at a Class III Level (%)	Number of Cultural Resources known in Allotment	Potential of Historic Properties	Management Recommendations (Additional inventory required and historic properties to be visited)
Couey 1	BLM	51	95.5	34.9%	3	Low/Moderate	No additional inventory and 2 sites to monitor (5GF.1504, 5GF.4627)
Couey 2 #08118	BLM	10.01	84.5	10.5%	0	Moderate	Additional inventory of 2.6 acres and no sites to monitor
	Private	0.24	515.46	0.05%			
Middle Mamm #08128	BLM	394.1	837.6	31.99%	10	Low/Moderate	Additional inventory of 25.3 acres and no sites to monitor
Dry Hollow Res. Gulch #08127	BLM	2242.1	4674.3	32.4%	15	Moderate/ High	Additional inventory of 6.7 acres and 2 site to monitor (5GF.256,5GF.1461)
	Private	7.3	116.5	5.9%			

A total of six cultural resource inventories (CRVFO CRIR# 768, 1092, 1166m 14604-2, 5405-19; OAHP# GF.LM.NR773) have been previously conducted within the Couey 2 Allotment #08118

resulting in the survey coverage of 10.25 acres at a Class III level. No cultural resources have been documented with these inventories for the National Register of Historic Places (NRHP). Looking at the GLO records there is no indications for any historic properties within the allotment.

There have been ten cultural resource inventories (CRVFO CRIR# 887, 1049, 1092, 1166, 14604-2, 5402-26, 5405-19, 5409-6; OAHP# GF.LM.R308, GF.LM.R307, GF.LM.NR773) have been preciously conducted within the Middle Mamm Allotment #08128. Ten cultural resources have been documented with these inventories including: five paleontological sites (5GF.2519, 5GF.2520, 5GF.2521, 5GF.2522, 5GF.2523) with no assessment given, three not eligible paleontological sites (5GF.1492, 5GF.3715, 5GF.3716), and two not eligible prehistoric isolated finds (5GF.3638, 5GF.3690) for the National Register of Historic Places (NRHP). Looking at the GLO records there is no indications for any historic properties within the allotment.

A total of four cultural resource inventories (CRVFO CRIR# 5405-19, 1112-6; OAHP# GF.LM.R292, GM.LM.R372) have been previously conducted within the Couey 1 Allotment #08115 resulting in the survey coverage of 51 acres at a Class III level. Three cultural resources have been documented with these inventories including a needs data historic site (5GF.1504), a not eligible historic site (5GF.3901), and an eligible prehistoric site (5GF.4627) for the National Register of Historic Places (NRHP). Looking at the GLO records from 1893 there is a chance for historic sites based on the historic wagon trails in the surrounding area.

In the Dry Hollow Reservoir Gulch Allotment #08127 there have been 35 cultural resource inventories (CRVFO CRIR# 591, 756, 863, 887, 942, 940C, 1001, 1025, 1092, 1151, 1144, 1144A, 1147, 1144B, 5402-8, 5402-21, 5403-15, 14604-2, 14505-4, 5405-19, 5406-3, 14506-6, 14506-8, 14506-9, 1006-22, 5407-3, 1107-26, 15909-1, 17310-1, 5412-3; OAHP# ME.FS.NR21, GF.LM.NR204, GF.LM.NR688, MC.E.R74, GF.LM.R400) resulting in a coverage of 2249.4 acres at a Class III level. Fifteen cultural resources have been documented with these inventories including: two needs data historic sites (5GF.1461 & 5GF.256), two not eligible historic sites (5GF.3950.1 & 5GF.3950.2), one not eligible historic isolated find (5GF.1533), five not eligible prehistoric isolated finds (5GF.3681, 5GF.3682, 5GF.4373, 5GF.4905, & 5ME.4905), and five paleontological sites with no assessment given (5GF.2524, 5GF.2525, 5GF.2548, 5GF.2549, 5GF.2550) for the National Register of Historic Places (NRHP). Looking at the GLO records no areas were identified for additional cultural resource inventory in the previous assessment of the allotment. Looking at the GLO maps of T8S R92W from 1914 show potential for a historic road and in T7S R92W maps from 1888 show no potential for historic sites.

ENVIRONMENTAL CONSEQUENCES.

The direct impacts that occur where livestock concentrate, during normal livestock grazing activity, can include trampling, chiseling, artifact breakage, and churning of site soils, cultural features, and cultural artifacts. Impacts from livestock standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art can also have direct impacts to cultural resources. Indirect impacts include soil erosion and gullying, which can lead to increased ground visibility which has the potential to increase unlawful collection and vandalism. Continued livestock use in these concentration areas has the potential to cause substantial ground disturbance and in turn, irreversible adverse effects to historic properties. New range improvements,

maintenance of existing range improvements, or additional feeding areas may require cultural resource inventories, monitoring, and/or data recovery.

All Alternatives. Based on the affected environment analysis, portions of allotments may require additional inventory in areas livestock concentrate, areas of known historic activity, or monitoring of known cultural resources.

A total of four cultural resources are recommended to be monitored during the term of this permit, two (5GF.1504, 5GF.4627) within the Couey 1 allotment and two (5GF.256, 5GF.1461) within the Dry Hollow Reservoir Gulch allotment. Additionally, 2.2 acres of inventory within the Couey 2 allotment, an additional 25.3 acres within the Middle Mamm allotment, and and additional 637 acres within the Dry Hollow Reservoir Gulch allotment are recommended to occur during the term of this permit.

Proposed Action Alternative. *All Allotments.* The requirement to have average utilization levels and minimum stubble height will have little change on cultural resource impacts. The use of this management technique might in fact be beneficial to lessen ground disturbance because it requires four inches left on grasses after grazing use has occurred to prevent erosion.

Couey 1, Couey 2, and Middle Mamm Allotments. There would be no changes to livestock kind, number, or season of use on these five allotments. Since there are no changes, this alternative will likely not change ground disturbing impacts to cultural resources in these areas.

Dry Hollow Reservoir Gulch Allotment. Restrictions to the summer schedule to require an AMP may be beneficial to cultural resources because it will ensure that infrastructure is in place to properly manage livestock. Adverse impacts to cultural resources across the allotment are reduced if livestock are not concentrating, trailing or otherwise creating surface disturbing impacts.

No Action Alternative. *All Allotments.* Under this alternative, no new changes would be proposed to livestock kind, season of use, or duration of use within the six allotments. Likely no new disturbances to cultural resources will occur from this continued use, but existing disturbance are like to continue.

No Grazing Alternative. *All Allotments.* Under this alternative, direct and indirect impacts to cultural resources from grazing would be reduced based on the absence of livestock and no related surface disturbing activities.

NATIVE AMERICAN RELIGIOUS CONCERNS

AFFECTED ENVIRONMENT.

American Indian religious concerns are legislatively considered under the American Indian Religious Freedom Act of 1978 (PL 95-341), the Native American Graves Environmental Assessment Protection and Repatriation Act of 1990 (PL 101-601), and Executive Order 13007 (1996; Indian Sacred Sites). These require, in concert with other provisions such as those found in

the NHPA and Archaeological Resources Protection Act (ARPA), that the federal government carefully and proactively take into consideration traditional and religious Native American culture and life. This ensures, to the degree possible, that access to sacred sites, the treatment of human remains, the possession of sacred items, the conduct of traditional religious practices, and the preservation of important cultural properties are considered and not unduly infringed upon. In some cases, these concerns are directly related to "historic properties" and "archaeological resources". In other cases, elements of the landscape without archaeological or other human material remains may be involved. Identification of these concerns is normally completed during the land use planning efforts, reference to existing studies, or via direct consultation.

The Ute have a generalized concept of spiritual significance that is not easily transferred to Euro-American models or definitions. The BLM recognizes that the Ute have identified sites that are of concern because of their association with Ute occupation of the area as part of their traditional lands. The cultural resource evaluation of these allotments describing known cultural resources and their condition was sent to the Southern Ute Indian Tribe, Ute Mountain Ute Tribe, and the Uinta and Ouray Agency Ute Indian Tribe. The letter, sent on January 15, 2016, requested the tribes to identify issues and areas of concern within the allotments. No comments were received.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action Alternative. *All Allotments.* During the cultural resource overview, one cultural resource within the Dry Hollow Reservoir Gulch Allotment is a type previously identified as being of interest to local tribes. The site is recommended to be monitored for impacts from livestock grazing and if impacts are determined, continued consultation with Native American tribes will help to determine the best approach for mitigation.

No Action Alternative. *All Allotments.* During the cultural resource overview, one cultural resource within the Dry Hollow Reservoir Gulch Allotment is a type previously identified as being of interest to local tribes. The site is recommended to be monitored for impacts from livestock grazing and if impacts are determined, continued consultation with Native American tribes will help to determine the best approach for mitigation.

No Grazing Alternative. *All Allotments.* Under this alternative, direct and indirect impacts to cultural resources from grazing would be reduced based on the absence of livestock and no related surface disturbing activities. Therefore, areas of concern to Native American tribes would not be affected.

LIVESTOCK GRAZING MANAGEMENT

AFFECTED ENVIRONMENT.

The Dry Hollow Reservoir Gulch, Middle Mamm, Couey 1, and Couey 2 Allotments are located in Garfield County approximately 10 miles south of Silt, CO. The allotments receive approximately 14 inches of precipitation annually (HPRCC).

Dry Hollow Reservoir Gulch Allotment. The allotment consists of 7,026 acres of public land and 125 acres of private land. The public land acreage ranges in elevation from approximately 6,600 to 8,100 feet. The allotment is used by 6 different permittees and is divided into 3 different pastures. The Dry Hollow Pasture is used by 4 permittees while trailing to the U.S. Forest Service. The Reservoir Gulch Pasture is used by one permittee and the Alkali Creek Pasture is used by one permittee. Little use currently occurs in the northeast portion of the allotment. This is the area that would be considered in the future for use during the summer with additional fencing and water improvements. The lower elevations are composed of pinyon and juniper woodlands with areas of sagebrush and mountain shrubs while the upper elevations are composed of Gambel oak and sagebrush.

Middle Mamm Allotment. This allotment consists of 1,234 acres of public land. The public land acreage ranges in elevation from approximately 7,000 to 8,100 feet. The allotment is used by 3 permittees who run cattle in common. Middle Mamm Creek runs through the southern portion of the allotment but is mostly fenced off from the allotment except for a small water gap that allows cattle access along a rock portion of the creek. The lower elevations are composed of pinyon and juniper woodlands with areas of sagebrush and mountain shrubs while the upper elevations are composed of Gambel oak and sagebrush.

Couey 1 Allotment. This allotment consists of 146 acres of public land. The public land acreage ranges in elevation from approximately 6,800 to 7,300 feet. The allotment is composed mostly of and pinyon and juniper woodlands. Cattle are not actively herded onto the allotment. Some use may occur along the lower edges when cattle are on adjacent private property.

Couey 2 Allotment. The allotment consists of 97 acres of public land and 514 acres of private land. The public land acreage ranges in elevation from approximately 7,600 to 7,800 feet. The public land portion of allotment is composed primarily of Gambel oak and is used in the spring when cattle are on adjacent private lands within the allotment boundaries.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. *Dry Hollow Reservoir Gulch Allotment.* The proposed action would eliminate the schedule on the permit authorizing grazing use from 6/16 to 10/15. The AUMs associated with this schedule would be placed into temporary suspension and may be available for future use when an AMP is developed and cattle can be managed on the allotment for a longer period. Another grazing permit would be issued without any changes to the grazing schedule. Previously suspended AUMs would be cancelled on both permits.

Other Allotments. Permitted use would be the same as previously authorized. The terms and conditions on the permit will allow for flexibility while still ensuring that Land Health Standards would continue to be met.

No Action Alternative. *All Allotments.* Under this alternative, grazing would continue at past levels. Grazing use may or may not occur during the summer months on the Dry Hollow Reservoir Gulch Allotment. Past billing has not shown grazing use during the summer in at least 30 years. It is unclear from the record when the last time grazing use was made during the

summer. It can be reasonably considered that grazing use would continue on all allotments at past levels.

No Grazing Alternative. *All Allotments.* Under this alternative, this grazing permit would be cancelled. Cancelling grazing use on these allotments may result in an economic loss to the permittee. This alternative would also initiate the process in accordance with 43 CFR parts 4100 and 1600 to eliminate grazing on these allotments and devote the land to some other purpose and would result in amendments to the resource management plan.

PLANTS: INVASIVE NON-NATIVE SPECIES (NOXIOUS WEEDS)

AFFECTED ENVIRONMENT.

Effects of Livestock. Livestock grazing can contribute to the establishment and expansion of noxious weeds and other invasive species through numerous mechanisms. Areas of disturbance provide an optimal location for noxious weed establishment and subsequent invasion (Sheley, et. al 2011). When livestock utilize an allotment they create localized areas of disturbance (i.e., bare ground), especially where animals congregate such as trails, loafing areas, salting areas, water sources, and other range improvements. When over-utilization occurs on a large scale, extensive areas of disturbance can develop, which can open up areas to the establishment of noxious weeds and other invasive species.

Risks of noxious weed introduction and spread would generally be greater with more AUMs unless livestock grazing management is specifically adjusted - by changing the season of use, duration, or intensity - to accomplish defined vegetation or weed reduction goals.

Seed Dispersal. Seed dispersal is another mechanism through which noxious weeds are spread. Livestock handlers, stock dogs, horses, feed, and equipment can potentially serve as vectors for seeds to be introduced or dispersed. Livestock can transport weed seeds from infested areas to uninfested areas through incomplete digestion and the attachment of seeds to body parts.

Additional Vectors for Seed Dispersal. People recreating and vehicles traveling across BLM lands can bring weeds from infested areas to non-infested areas through seed dispersal. Pack and saddle stock users can spread weeds through weed infested feed, incomplete digestion, and the attachment of seeds to body parts. Wind and wildlife also spread weeds. Surface disturbances such as fire and construction projects increase the risk for weed establishment.

Inventory. Preventing and controlling noxious weed encroachment depends on early detection (Sheley, et al. 2011). Landscape-wide weed inventories can help with early detection and controlling noxious weeds and other invasive species infestations. Although a landscape-wide inventory has not been completed on the Moniger Ridge 2 (No. 08646) Allotment, infestations known to occur within or adjacent to the Allotment are listed in Table 5. It is assumed that these and other noxious weeds/invasive species may be found in areas throughout the allotment.

Table 8. Known Noxious Weeds within the Allotments.

Common Name	*Scientific Name*	State Designation
Houndstongue	*Cynoglossum officinale*	B
Canada thistle	*Cirsium arvense*	B
Musk thistle	*Carduus nutans*	B
Plumeless thistle	*Carduus acanthoides*	B
Russian Knapweed	*Acroptilon repens*	B

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. *Dry Hollow Reservoir Gulch Allotment.* The proposed action would place the summer and fall grazing use (from 6/16 to 10/15) on this grazing permit in temporary non-use until an AMP and appropriate infrastructure can be installed that would improve livestock distribution and make season-long grazing feasible. Suspending AUM's will result in decreased localized areas of disturbance (i.e., bare ground) and implementing an AMP that improves livestock distribution would likely prevent over-utilization for occurring throughout the allotment, especially in Dry Hollow Reservoir Gulch riparian area. Shorting the grazing season to end 6/30 instead of 10/15 will remove livestock from the allotment during peak seed production stages for the species of noxious weeds associated with the Proposed Action which should lower the dispersal of seed caused by livestock.

Couey 1, Couey 2, Middle Mamm Allotments. Permitted use would be the same as previously authorized. Livestock will create localized areas of disturbance, especially where animals congregate such as trails, loafing areas, salting areas, water sources, and other range improvements. Livestock can transport weed seeds from infested areas to uninfested areas of an allotment through incomplete digestion and the attachment of seeds to body parts. Livestock handlers also have the potential to spread seed. Wind and wildlife can also spread weeds. Surface disturbances such as fire and range- improvement/construction projects could increases the risk for weed establishment. The Proposed Action is expected to maintain conditions on the allotment and it can be assumed that no significant impacts to the level of noxious weeds or invasive species will occur.

No Action Alternative. *Dry Hollow Reservoir Gulch Allotment.* The No Action Alternative results in no changes to grazing management authorized. No AUMs would be temporary suspended and no AMP would be initiated. Season-long grazing may or may not occur on the allotment and no infrastructure would be implemented on the allotment to aid in distribution of livestock. Localized areas of disturbance will occur where animals congregate but without infrastructure to make season long grazing feasible these localized areas of disturbance could have a high potential of becoming over-utilized, extensive areas of disturbance which could result in a significant increase in the level of noxious weeds and invasive species on the allotment. Furthermore, under the No Action Alternative, livestock would be utilizing the allotment during the peak stages of the seed production for houndstongue and thistle and animals would be transporting seeds throughout the allotment to large areas of disturbance.

Couey 1, Couey 2, Middle Mamm Allotments. The No Action Alternative is the same as the Proposed Action; therefore, impacts would expected be similar to the Proposed Action. Ultimately, it cannot be determined that impacts of the No Action Alternative would significantly contribute to the spread invasive, non-native species.

No Grazing Alternative. *All Allotments.* Under this alternative, no livestock grazing would occur on the allotments and there would be no direct or indirect impacts to weeds from livestock use or management activities associated with grazing. Grazing by wildlife may create localized areas disturbances that could enable weed expansion and seed could be dispersed onto the allotment by wind, wildlife, wildfire, and recreationists.

SENSITIVE, THREATENED, AND ENDANGERED PLANTS

AFFECTED ENVIRONMENT.

Table 9 includes the U. S. Fish and Wildlife Service's (USFWS 2015) list of federally listed, proposed, or candidate plant species and the Colorado BLM State Director's Sensitive Species List (BLM 2015b) for sensitive plant species that may occur within Garfield County and may be impacted by the proposed action. The table also summarizes their habitat descriptions and potential for occurrence in the proposed action area based on known geographic range and habitats present.

Table 9. Special Status Plant Species in Garfield County.

Federally Listed, Proposed or Candidate Plant Species		
Species	**Habitat**	**Potential for Occurrence**
Colorado hookless cactus (*Sclerocactus glaucus*) Threatened	Found on rocky hills and alluvial benches in xeric fine-textured soils often overlain with cobbles and pebbles. It grows in salt desert shrub and pinyon-juniper communities at elevations ranging from approximately 4,500 to 6,600 feet.	**No:** The lowest elevation on any of the allotments is 6,400 feet along West Mamm Creek on the north parcel of Couey 1 allotment. The vegetation is mixed greasewood and big sagebrush. The soils did not appear suitable for Sclerocactus and none were observed during the land health assessment. No suitable habitat exists for Colorado hookless cactus.
DeBeque phacelia (*Phacelia submutica*) Threatened	Sparsely vegetated slopes in chocolate-brown, gray, or red clay on Atwell Gulch and Shire Members of the Wasatch Formation between 4,700 and 6,200 feet.	**No:** Much of the proposed action area is mapped as the Wasatch Formation but does not include exposures of the Atwell Gulch or Shire Gulch Members. The allotments are all above the elevational range for this species; therefore, no potential habitat exists for DeBeque phacelia.
Parachute penstemon (*Penstemon debilis*) Threatened	Steep, south-facing, sparsely vegetated, white shale talus of the Parachute Creek Member of the Green River Formation; 8,000 to 9,000 feet.	**No:** There are no exposures of the Green River Formation within the proposed action area and therefore, no potential habitat for Parachute penstemon.

Ute ladies'-tresses orchid (*Spiranthes diluvialis*) Threatened	Habitat for this threatened species is found in seasonally flooded or subirrigated alluvial soils along streams, lakes or in wetland areas; 4,500 to 7,200 feet. Frequently found in herbaceous wetlands; less common in shrubby environments.	**No:** West Mamm Creek, East Mamm Creek, Dry Hollow, and Alkali Creek are all within the elevational range of this species. However, the riparian areas along each of these streams are very flashy systems lacking in herbaceous riparian vegetation and thus, would likely be unsuitable habitat for the orchid.
BLM Sensitive Plant Species		
Species	**Habitat**	**Potential for Occurrence**
Cathedral Bluffs meadow-rue (*Thalictrum heliophilum*)	Endemic on sparsely vegetated, steep shale talus slopes of the Green River Formation; 6,300-8,800 feet	**No:** There are no exposures of the Green River Formation within the proposed action area and therefore, no potential habitat for Cathedral Bluffs meadow-rue.
DeBeque milkvetch (*Astragalus debequaeus*)	Varicolored, fine-textured, seleniferous or saline soils of Wasatch Formation; 5,100 to 6,400 feet	**No:** All of the allotments are above the known elevational range for this species.
Harrington's penstemon (*Penstemon harringtonii*)	Wyoming or mountain big sagebrush or mixed mountain shrub communities on rocky loam or rocky clay loam soils between the elevations of 6,200 to 10,000 feet. Soils usually of basaltic or calcareous nature.	**Yes:** Harrington's penstemon is typically found in open sagebrush habitats with mountain big sagebrush (*Artemisia tridentata ssp. vaseyana)* or Wyoming sagebrush (*A. tridentata ssp. wyomingensis*) on the edges of pinyon-juniper or oakbrush habitats. It is rarely found with Basin big sagebrush (*A. tridentata ssp. tridentata*) in the deeper soil along drainages. It occurs in rocky clay loams derived from calcareous materials between the elevations of 6,100 and 10,000 feet. The nearest known populations of Harrington's penstemon occur on Grass Mesa approximately 3-4 miles to the west and northwest of the allotments. No populations of Harrington's penstemon have been found within or adjacent to these allotments during the 2009 land health assessment or oil and gas-related surveys.
Naturita milkvetch (*Astragalus naturitensis*)	Sandstone mesas, ledges, crevices and slopes in pinyon/juniper woodlands; 5,000 to 7,000 feet. Grows in areas of shallow soils over exposed bedrock	**No:** The four allotments do not contain any areas of exposed bedrock or sandstone mesas and ledges, thus, no potential habitat exists for Naturita milkvetch.
Roan Cliffs blazing-star (*Mentzelia rhizomata*)	Steep, eroding talus slopes of shale of the Green River Formation; 5,800-9,000 feet	**No:** There are no exposures of the Green River Formation within the proposed action area and therefore, no potential habitat for the Roan Cliffs blazing-star.

ENVIRONMENTAL CONSEQUENCES.

All Alternatives. The four allotments in the proposed action do not contain any potential habitat for Colorado hookless cactus, DeBeque phacelia, or Parachute penstemon. West Mamm Creek, East Mamm Creek, Dry Hollow, and Alkali Creek are all within the elevational range of Ute ladies'-tresses; however, the riparian areas along each of these streams are very flashy systems lacking in herbaceous riparian vegetation and thus, would be considered unsuitable habitat for the orchid. Therefore, the alternatives would have "No Effect" on these species.

Numerous botanical surveys and site visits have not documented any occurrences of Harrington's penstemon on these allotments. Given the lack of any known special status plant populations, and the apparent scarcity of suitable habitat, the alternatives would have little or no impact to Harrington's penstemon or other sensitive plants.

Analysis of Public Land Health Standard 4 for Special Status Plants.

Based on the lack of known occurrences or suitable habitat for special status plants within the area, the proposed action would have no impact on any special status plants and Standard 4 would not apply.

VEGETATION

Affected Environment.

The Couey 1 and 2, Dry Hollow Reservoir Gulch, and Middle Mamm Common allotments are all located on the northern and eastern flanks of Battlement Mesa south of Silt, Colorado. Elevations range from a low of approximately 6,400 feet on the northern parcel of the Couey 1 Allotment to a high of over 8,100 feet on the Dry Hollow Reservoir Gulch Allotment.

The dominant vegetation on the Couey 1 and Dry Hollow Allotments is pinyon-juniper woodlands on the south-facing slopes and rockier soils, basin big sagebrush and black greasewood on alluvial terraces, and Wyoming and black sagebrush interspersed with Gambel oak and mixed mountain shrubs on the mesas and ridgetops. The understory is comprised of various native, perennial grasses and forbs along with some introduced Kentucky bluegrass. The riparian areas are dominated by woody riparian species such as narrowleaf cottonwood and buffaloberry.

The Couey 2 and Middle Mamm Common Allotments are primarily vegetated with a mosaic of Gambel oak/serviceberry/black sagebrush and Wyoming big sagebrush shrublands. Middle Mamm allotment also has extensive pinyon-juniper woodlands and some sparsely vegetated badlands. The riparian area of Middle Mamm Creek is dominated by narrowleaf cottonwood, Rocky Mountain maple, river birch and alder.

Environmental Consequences.

Direct impacts to vegetation from livestock grazing include removal of vegetation and trampling damage. Well-managed livestock grazing can stimulate plant growth by removing old or dried vegetation thereby improving photosynthetic activity of live plant material. Hoof action from

livestock can be used to improve seed contact with the soil which promotes the germination and establishment of new plants. If the timing or intensity of grazing does not allow adequate recovery and regrowth periods between grazing events, grazing has the potential to significantly alter vegetative community composition and cover. Livestock grazing may cause direct mortality of individual plants from trampling, uprooting, or excessive grazing that depletes root reserves to the point where plants cannot recover. The risk of trampling mortality is greatest in areas where livestock congregate, such as near water sources, salting locations, or along fence lines. Livestock can also change plant species composition through selective grazing. Livestock graze more heavily on the most palatable plant species, which can cause these species to decrease and allow less preferred species to increase. Surface disturbances may result where livestock congregate. Surface disturbances create a niche for the invasion and proliferation of noxious weeds and other invasive species which can compete with the native plant community for limited resources. Grazing that does not exceed roughly 40-50% of the current year's growth and does not repeatedly defoliate the same plants or species will generally maintain plant health.

Proposed Action. *Dry Hollow Reservoir Gulch Allotment.* The proposed action would place the summer and fall grazing use (from 6/16 to 10/15) on this grazing permit in temporary non-use until an AMP and appropriate infrastructure can be installed that would improve livestock distribution and make season-long grazing feasible. Grazing on this revised permit would occur for only 15 days in late spring. The allotment is also grazed during the spring by several other permittees, with the longest grazing period from 6/1-6/30. Since all grazing use would end by 6/30, this should allow adequate opportunity for recovery of root reserves and for seed dissemination and seedling establishment to maintain healthy plant communities.

Couey 1, Couey 2, Middle Mamm Allotments. Grazing in the Couey 1 Allotment would occur for the month of May (5/1-5/31), be rested during most of the growing season and then grazed again for one month in the fall (10/15-11/15). With grazing rest for most of the growing season and with a total of only 4 AUMs, the current grazing schedule is not expected to result in declines in vegetative health.

The Couey 2 Allotment would be grazed during most of the growing season (6/20-10/19). The intensity and timing of grazing could result in declines in vegetative health if livestock congregate on public land; however, the allotment is only 5% public land, which indicates that most of the grazing use occurs on private land. No areas of concentration were observed during the land health assessment.

The grazing permit being analyzed in this EA for the Middle Mamm Common Allotment would authorize grazing by 112 cow/calf pairs from 6/3-6/30. There are an additional 29 head of cattle authorized on this allotment from 6/1-6/30. There is no utilization or trend data in the monitoring files to analyze the effects of livestock grazing; however, the most recent land health assessment (2009) determined that the allotment was meeting Standard 3. An interdisciplinary team revisited the allotment in 2015 and no substantial concerns were noted regarding the condition of the plant communities. The timing and intensity of grazing should maintain plant health by providing adequate plant recovery and regrowth periods following grazing and by providing the opportunity for seed dissemination and seedling establishment.

No Action Alternative. The No Action alternative for the Dry Hollow Reservoir Gulch allotment would authorize grazing of 195 cattle from 6/1-6/15 and then 57 cattle from 6/16-10/15. The allotment has not been used in the summer and fall in recent years, but if this use were reactivated, problems would be anticipated. Several livestock ponds on the allotment are not currently functioning and thus, portions of the allotment are not used and proper livestock distribution is difficult to achieve. If livestock congregate in localized areas for much of the growing season, there could be some reduction in plant vigor, diversity and reproduction, causing a decline in land health. The diversity of native perennial grasses is somewhat lacking at key areas on this allotment, with bluegrasses comprising the dominant grass cover. Terraces adjacent to Dry Hollow Gulch have excessive bare ground, few perennial grasses and forbs, and a moderate infestation of noxious weeds, such as houndstongue. These terraces appear to be a livestock, and possibly a big game, concentration area. If season-long use is reactivated and no new infrastructure is developed, the No Action Alternative may exacerbate this decline in vegetative conditions along Dry Hollow Gulch.

For the remainder of the allotments, the No Action Alternative would have the same environmental effects as the Proposed Action.

No Grazing Alternative. Under this alternative, no livestock grazing would occur on these allotments and there would be no direct or indirect impacts to vegetation from livestock use. There would be an increase in vegetative biomass without the presence of livestock to remove vegetative material. Dead and dried stems and seed stalks may build up over time, particularly on the more mesic and more productive sites, reducing photosynthetic activity which may result in less vegetative vigor and biomass in the long-term. There would also be less surface disturbance due to trampling and removal of vegetation and therefore, less risk of noxious weed invasion. Wind, wildlife and some vehicular traffic would continue to distribute weed seeds and contribute to some weed expansion. Big game animals would continue to use the allotments, particularly in the winter, resulting in hedging and decadence of sagebrush and other palatable shrubs.

ANALYSIS OF PUBLIC LAND HEALTH STANDARD 3 FOR HEALTHY PLANT COMMUNITIES.

BLM staff concluded that upland vegetation on these four allotments was meeting Standard 3 for plant communities or meeting the standard with some problems at the time of the Divide Creek Land Health Assessment (BLM 2009). Some concerns noted regarding resource condition during the land health assessment included a compaction layer moderately restricting root growth, sparse perennial grass cover in sagebrush communities, cheatgrass and other invasive species dominating well pad reclamation, and some heavy browsing on shrubs in localized areas leading to reduced reproductive potential. However, none of these conditions rose to the level of failing to meet the Standard. A BLM interdisciplinary team revisited Dry Hollow and Middle Mamm Common Allotments in 2015 to assess current conditions. Middle Mamm Allotment was determined to be in good ecological condition and still meeting all the standards. Dry Hollow had localized areas of concern, particularly the upland terraces immediately adjacent to riparian areas. Provided that season-long grazing and trespass grazing do not occur, the proposed action should continue to maintain upland vegetative conditions on these allotments.

SOCIO-ECONOMICS

AFFECTED ENVIRONMENT.

Regionally, livestock operations are dependent on both federal lands (BLM and U.S. Forest Service) and nonfederal lands (state and private). The federal grazing fee for public lands managed by the BLM and the U.S. Forest Service is $2.11 per animal unit month (AUM). An AUM is the amount of forage needed to sustain one cow and her calf, one horse, or five sheep or goats for a month. The annually adjusted grazing fee is computed by using a 1966 base value of $1.23 per AUM for livestock grazing on public lands in the western states. The figure is then adjusted according to three factors - current private grazing land lease rates, beef cattle prices, and the cost of livestock production. The formula used for calculating the grazing fee, established by Congress in the 1978 Public Rangelands Improvement Act, has continued under a presidential Executive Order issued in 1986. Under that order, the grazing fee cannot fall below $1.35 per AUM, and any increase or decrease cannot exceed 25 percent of the previous year's level.

Public land grazing in the CRVFO supports a traditional and historical way of life. Although historically livestock grazing in the region was at a higher intensity than at the present time, the livestock business has, and continues to be a traditional way of life for many permit holders. Income derived from public land grazing permits continues to comprise a moderate to substantial portion of their individual livelihoods.

The total economic contribution from ranching operations on BLM lands is statistically low within the region. Jobs and labor income associated with BLM grazing accounts for less than 1 percent of the area's total jobs and labor income (BLM 2014).

Fees paid to the federal government for livestock grazing permits generate revenue for the U.S. Treasury, of which 12.5 per cent is returned to the local Grazing Advisory Board to fund range improvements and maintenance projects. This provides a direct economic benefit to the permit holders who pay the fees. The support of livestock operations contributes to the economic support of local communities and to the livestock industry in the West in general.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. The Proposed Action would a renew ten year term grazing permit/lease for the livestock operator, thereby continuing an historical and traditional way of life for this area. The social value of retaining a rural, agricultural lifestyle would be preserved and would align with many of the public's perception of the western Colorado culture.

Issuance of the grazing permits/leases would allow the lease holders to continue their grazing operations with some degree of predictability during the ten-year period of the term lease.

The local economy is benefited from capital spent to establish and maintain a ranching operation and contributions to the labor force. The Proposed Action would support some direct employment. Additional employment would be generated as the affected livestock operators purchase services and materials as inputs ("indirect" effects) and ranchers spend their earnings within the local economy ("induced" effects).

No Action Alternative. Impacts from this alternative will be similar to the Proposed Action.

No Grazing Alternative. Under the No Grazing Alternative, the ten year term grazing lease would not be renewed. The individual lease holders could be negatively impacted in the short term by loss of income. If livestock grazing was terminated, there would also be adverse impacts to the base property owner(s). There could be an annual loss of income because they may not be able to lease their private lands without having the BLM land grazing allotments. Consequently, the value of their properties could be reduced because of the elimination of the federal grazing preference. Such a loss of income would be important to the individuals, but would likely not measurably or adversely impact the local economies.

SOILS

AFFECTED ENVIRONMENT.

A review of the soil survey by the NRCS for the *Rifle Area, Colorado, Parts of Garfield and Mesa Counties* indicate numerous soil map units occur within the proposed allotments (NRCS 1985). The NRCS soil map unit descriptions are provided below for the dominant soil types by allotment (NRCS 2015).

Couey 1 & Couey 2 Allotments.

- Ascalon-Pena complex (7) – This soil map unit is found on the sides of valleys and alluvial fans at elevations ranging from 5,000 to 6,500 feet and on slopes of 6 to 25 percent. The Ascalon soil is deep, well drained and has medium surface runoff with moderate erosion hazard. The Pena soil is deep, well drained and has slow surface runoff with moderate erosion hazard.
- Bucklon-Inchau loams (12) – These soils occur on ridges and mountainsides at elevations ranging from 7,000 to 9,500 feet and on slopes of 25 to 50 percent. The Bucklon soil is shallow, well drained and has medium surface runoff with severe erosion hazard. The Inchau soil is moderately deep, well drained and has medium surface runoff with severe erosion hazard.
- Nihill channery loam (46) – This deep, well drained, gently sloping soil is found on alluvial fans and sides of valleys at elevations ranging from 5,000 to 6,500 feet and on slopes of 1 to 6 percent. This soil is derived from shale and sandstone of the Green River Formation. Surface runoff for this soil is slow and the erosion hazard is moderate.
- Torriorthents-Rock outcrop complex, steep (67) – This complex consists of stony soils and exposed outcrops of Mesa Verde sandstone and Wasatch shale that occur on slopes of 15 to 70 percent. The Torriorthents are clayey to loamy and contain gravel, cobbles, and stones; many of which are basaltic in origin. Erosion hazard for this complex varies from moderate to severe.

Dry Hollow Reservoir Gulch Allotment.

- Dollard-Rock outcrop shale complex (24) - This complex consists of shale outcrops and shale derived soils that are found on hills and mountainsides at elevations ranging from 6,000

to 7,500 feet and on slopes of 25 to 65 percent. The Dollard soil is moderately deep, well drained and has rapid surface runoff with severe erosion hazard.

- Jerry loam (39) - This deep, well-drained soil is found on mountainsides at elevations ranging from 7,000 to 9,500 feet and on slopes of 12 to 50 percent. Parent material for this soil is sandstone, shale, and basalt. Surface runoff for this soil is slow and the erosion hazard is moderate.
- Torriorthents-Camborthids-Rock outcrop complex (66) & Torriorthents-Rock outcrop complex (67) - two complexes that consists of stony soils and exposed outcrops of Mesa Verde sandstone and Wasatch shale that occur on slopes of 15 to 70 percent. Erosion hazard for this complex varies from moderate to severe.
- Villa Grove-Zoltay loams (71) - These soils occur on mountainsides and alluvial fans at elevations ranging from 7,500 to 7,600 feet and on slopes of 15 to 30 percent. The Villa Grove soil is deep, well drained and has slow surface runoff with slight erosion hazard. The Zoltay soil is deep, well drained and has medium surface runoff with moderate erosion hazard.

Middle Mamm Common Allotment.

- Badland unit (9) - consists of steep, barren land that has been dissected by intermittent drainages. This unit occurs in soft shale, sandstone, and siltstone of the Green River, Wasatch, Mancos, and Mesa Verde Formations. This soil map is approximately 85 percent unvegetated, has very severe erosion hazard, and frequent active erosion.
- Buckon-Inchau Loam (12) - These soils occur on ridges and mountainsides at elevations ranging from 7,000 to 9,500 feet and on slopes of 25-50 percent. The Bucklon soil is shallow, well drained and has medium surface runoff with severe erosion hazard. The Inchau soil is moderately deep, well drained and has medium surface runoff with severe erosion hazard.
- The Morval-Tridell complex (45) - is found on alluvial fans and the sides of mesas at elevations ranging from 6,500 to 8,000 feet and on slopes of 6-25 percent. Both soils are deep, well drained and have medium surface runoff and moderate erosion hazard.
- The Torriothents-Rock outcrop complexes (66 & 67) – described above.

Soil health was evaluated in 2009 during the Divide Creek Land Health Assessment. BLM staff concluded that soils were meeting land health standards throughout the proposed allotments, though several slight to moderate departures from expected conditions were noted (BLM 2009). In 2015, BLM staff noted some moderate soil impacts in the Dry Hollow Reservoir Gulch Allotment, likely from grazing concentration along the stream banks of Dry Hollow.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Grazing activities may result in direct soil compaction and displacement that increase the likelihood of erosional processes, especially on steep slopes and areas devoid of vegetation. Soil detachment and sediment transport are likely to occur during runoff events associated with spring snowmelt and short-duration high intensity thunderstorms. Indirect impacts from grazing include soil erosion and gullying. Based on existing soil conditions and generally good vegetative cover; the likelihood of livestock grazing contributing to excessive soil degradation and transport to nearby drainages is not expected. Grazing activities on the proposed allotments would not likely create long term effects that would compromise soil stability on a large

scale. Small-scale and localized disturbances would likely be limited to concentration areas, such as trailing, salting and watering areas.

No Action Alternative. For the majority of the allotments, the no action alternative has similar impacts as the proposed action alternative described above. However, for the Dry Hollow Reservoir Gulch Allotment, an important distinction with the proposed action is the development of an AMP and utilization limits be put in place to protect the stream. Terraces adjacent to Dry Hollow Creek appeared to have heavy livestock and big game concentration and trampling. These terraces had excessive bare ground, few perennial grasses and forbs, and a moderate infestation of noxious weeds, such as houndstongue. The no action alternative may perpetuate this decline in soil condition and potentially water quality along Dry Hollow, if no management changes are taken to improve the current condition.

No Grazing Alternative. Under this alternative, no livestock grazing would occur and there would be no direct or indirect impacts to soils from livestock use. However, trampling or removal of plant material may still occur from wildlife usage. In addition, soil disturbance and erosion may persist due to other surface disturbing activities, such as roads and trails that exist throughout the allotment.

Analysis of Public Land Health Standard 1 for Soils.

Based on the Divide Creek Land Health Assessment, BLM staff concluded that soils are meeting Standard 1 with slight and moderate departures from expected conditions (BLM 2009). Implementation of the proposed action is not anticipated to degrade soil health from current conditions if best management practices and AMP terms and conditions are followed.

WATER QUALITY (SURFACE AND GROUND)

Affected Environment.

Couey 1 & Couey 2 Allotments. The allotments are part of the West and Middle Mamm Creek watersheds. The southern portion of the Couey 1 allotment is in an upland area without defined drainages, while the northern portion of the Couey 1 allotment has approximately 0.2 miles of West Mamm Creek flowing through it. Overland flow from the Couey 2 allotment feeds Gant Gulch before flowing into West Mamm Creek. With the exception of West Mamm Creek, the allotments are dry except when runoff is generated from snowmelt or summer convective storms. Limited data is available for West Mamm Creek. USGS collected data in October 2003 and found discharge was 0.21 cubic feet per second (cfs), specific conductance was 1,500 microsiemens per centimeter (µS/cm), and temperature 12.8 °C. The elevated conductance reading is a reflection of the Wasatch geology underlying the allotment. Generally high flows occur from mid-May through June.

Middle Mamm Common Allotment. This allotment lies primarily within the Middle Mamm Creek watershed; however runoff from the northwestern portion of the allotment feeds Gant Gulch a tributary to West Mamm Creek. The only perennial stream within the allotment is approximately a

½ mile reach of Middle Mamm Creek on the extreme southern boundary of the allotment. While very limited flow and water quality data are available for this area, the hydrology is projected to be similar to that in Beaver Creek. The USGS operated gaging station #09092500 on Beaver Creek from 1952 to 1982. The gage was located several miles west of the allotment. Average flow was 4.65 cfs, the minimum daily was 0.24 cfs recorded on December 21, 1973, and the highest daily mean was 85 cfs in May, 1962. High flow generally occurred from mid-May through June. Specific conductance was also monitored and was generally below 500 uS/cm indicating very good water quality. Most of the allotment is drained by a series of northeast trending unnamed ephemeral tributaries to Middle Mamm Creek. These are generally dry with the exception of snowmelt periods and when convective storms produce runoff.

Dry Hollow Reservoir Gulch Allotment. This allotment lies in the East Mamm and West Divide watersheds. Runoff from most of the western portion of the allotment is carried by unnamed ephemeral tributaries to Dry Hollow and then to East Mamm Creek. Runoff from the eastern portion of the allotment is carried by unnamed ephemeral tributaries of Halls Gulch to West Divide Creek, or by Reservoir Gulch or Alkali Creek to West Divide Creek. With the exception of slightly more than one mile of East Mamm Creek flowing along the western boundary of the allotment, all drainages are projected to be intermittent or ephemeral. They are therefore dry most of the year, except when runoff is generated from snowmelt or summer convective storms. West Divide Creek flow and water quality has been monitored by USGS (station #09089500) since 1955. The station is located approximately 5 miles southeast of the allotment. Mean flow is 36.5 cfs, lowest flow was no flow, and highest daily mean was 933 cfs. High flow generally occurs in May. The water is a calcium bicarbonate type, and specific conductance is typically 300-400 uS/cm. Sediment levels generally range from 20-400 milligrams per liter. Quality for the other streams within the allotment is described above.

The State of Colorado has developed *Stream Classifications and Water Quality Standards* that identify beneficial uses of water and numeric standards used to determine allowable concentrations of water quality parameters (CDPHE 2015). Tributaries in the proposed allotments are listed under the Lower Colorado River Basin and have water use classifications described below:

Table 10. State of Colorado's Stream Classifications and Water Quality Standards for Stream Segments in the Allotments (CDPHE 2015).

Stream Segment Description	Classifications	Water Quality Stds
4a. All tributaries, including wetlands, to the Colorado River from the confluence with the Roaring Fork River to immediately below the confluence with Parachute Creek.	Aquatic Life Cold 2 Recreation N Water Supply Agriculture	D.O. = 6.0 mg/l pH = 6.5-9.0 E.Coli = 630/100ml

Aquatic life cold 2 are waters that are not capable of sustaining a wide variety of cold water biota, including sensitive species, due to physical habitat, water flows, or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species. Recreation N refers to stream segments with surface waters that are not suitable or intended to become suitable for primary contact recreation uses. Water supply and agriculture refer to stream segments that are suitable or intended to become suitable for potable water supplies and suitable for irrigation or livestock use.

The State of Colorado has also developed a *303(d) List of Impaired Waters* and *Monitoring and Evaluation List* (CDPHE 2012) that identifies stream segments that are not currently meeting water quality standards with technology based controls alone. Stream segment 4a, which includes Mamm Creeks (West, Middle and East tributaries) and Dry Hollow, is 303(d) listed; thus indicating water quality standards are not currently being met.

Table 11. State of Colorado's 303(d) List of Impaired Waters affecting the Proposed Allotments (CDPHE 2012).

303(d) List: Lower Colorado River Basin				
WBID	Segment Description	Portion	Impairment	Priority
COLCLC04a	Tributaries to the Colorado River, Roaring Fork to Parachute Creek	All	Selenium	Medium

During the 2009 Land Health Assessment, several field water quality parameters were collected, but did not include selenium specific testing (Table 12). The data results below indicate elevated pH, (several measurements are above state standards), which is likely a result of the geochemistry of the geology and soils throughout the allotments.

Table 12. BLM water quality testing results during the Divide Creek Land Health Assessment (BLM 2009).

Stream Name	Date	Discharge (cfs)	Temp. (°C)	Cond. (µS\cm)	pH	Salinity ppt	Dissolved Oxygen	
							%	mg/l
Alkali Creek	5/19/2009	0.7	18	381	11.4	0.2	77	7.37
Dry Hollow	5/19/2009	1.63	13.4	339	10.9	0.2	84	8.75
East Mamm Creek	5/19/2009	5.66	14.2	407	10.9	0.2	81	8.28
Middle Mamm Creek	5/19/2009	12	7.3	32	10.2	0.1	74	8.4
West Mamm Creek	7/8/2009	0.09	26.2	1323	8.36	0.6	60	4.52

Livestock grazing is not typically considered a source for water quality impairment related to selenium. Studies have shown that selenium loading is predominantly related to irrigation practices and deep water percolation in saline geology and soils, particularly Mancos Shale. However, certain range improvement projects, such as new stock pond construction may have a small effect on water quality. Additionally, in areas with grazing concentration, there is the potential to cause soil erosion that may contribute slightly to already impaired streams.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. *Couey 1 Allotment.* Grazing would occur for the month of May, be rested during most of the growing season and then grazed again for one month beginning in mid-October. The early grazing period would correspond with the snowmelt period for the area. Consequently, West Mamm Creek would be experiencing high flows and the ephemeral tributaries could be flowing for a few days during that period as well. The proposed timing and intensity of grazing is not projected to produce impacts to water quality. With abundant water and extended rest for vegetative recovery, watershed cover would be maintained and potential sediment impacts minimized.

Couey 2 Allotment. Grazing would occur during most of the growing season beginning in the third week in June and ending in mid-October. The intensity and timing of grazing could decrease watershed cover and increase soil compaction especially where livestock congregate with a resultant increase in sediment loading from those areas. Since this allotment does not have any perennial streams, sediment transport efficiency is reduced. Some sediment may reach Gant Gulch and ultimately West Mamm Creek, but the concentrations are not projected to be at a level that would produce a measurable increase.

Middle Mamm Common Allotment. Grazing would occur during the month of June. This timing would coincide with high flow from snowmelt in West and Middle Mann Creeks. Flow may also occur in the ephemeral drainages for several days during the grazing period. Generally the timing and intensity of grazing proposed would not produce long term water quality impacts. Most of the growing season would be available for vegetative recovery, so watershed health should be maintained. While abundant water should provide for good livestock distribution, there may still be localized areas where livestock congregate. The damp to wet soils could be compacted and vegetative cover reduced. These areas could produce short term elevated sediment loading. That sediment is not projected to reach the Colorado River, however. The 10 mile transport distance, riparian vegetation along the streams, reservoirs that would trap sediment, road borrow ditches, irrigation withdrawals and other factors would detain sediment before it reaches the river.

Dry Hollow Reservoir Gulch Allotment. The proposed action would place the grazing use (from 6/16 to 10/15) in temporary non-use until an AMP and appropriate infrastructure can be installed that would improve livestock distribution and make season-long grazing feasible. Grazing on this revised permit would occur for only 15 days in late spring. The grazing period would follow normal peak runoff, but flows would generally still be elevated from snowmelt. There are numerous reservoirs on the allotment and some of the ephemeral drainages could be flowing. Water developments throughout the allotment should facilitate good livestock distribution. In general, watershed cover should be maintained within the allotment. There may be localized areas where livestock congregate that experience a decrease in vegetative cover and could produce sediment. That sediment is projected to settle out before reaching the Colorado River some 10 miles to the north. Numerous reservoirs on the allotment would trap sediment as would upland and riparian vegetation. There is a buffer offered by the Highline Ditch on the east side of the allotment in addition to numerous road borrow ditches. No measurable increase to the sediment level of the Colorado River would occur with grazing in this allotment.

Only three groundwater sources are present in the proposed allotments, and all occur in the Dry Hollow Reservoir Gulch allotment. These sources are small springs that have been developed to

provide livestock and wildlife watering. Dry Hollow Reservoir #10 Spring, Hell's Gulch Spring, and Riley Stockpond #2 Spring each have decreed water rights. Livestock use at these sources may temporarily impact water quality through increased turbidity and nutrients, but in the long term groundwater water quality is not expected to be impacted substantially.

No Action Alternative. For the majority of the allotments, the no action alternative has similar impacts as the proposed action alternative. Thus, the environmental consequences described above are similar for this alternative. However, for the Dry Hollow Reservoir Gulch allotment, an important distinction is the development of an AMP and utilization limits be put in place to protect the stream. Terraces along Dry Hollow creek appeared to have heavy livestock and big game concentration and trampling. These terraces had excessive bare ground, few perennial grasses and forbs, and a moderate infestation of noxious weeds, such as houndstongue. The no action alternative may perpetuate a decline in soils and water quality along Dry Hollow, if no management changes are taken to improve the current condition.

No Grazing Alternative. Under this alternative, no livestock grazing would occur and there would be no direct or indirect impacts to water quality from livestock use. Trampling or removal of plant material may still occur from wildlife grazing, and soil disturbance and erosion may persist due to other surface disturbing activities, such as roads and trails that exists throughout the allotment, which could potentially affect water quality.

Analysis of Public Land Health Standard 5 for Water Quality.

Stream segment 4a, which includes West Mamm, Middle Mamm, East Mamm and Dry Hollow within the proposed allotments, is 303(d) listed for impaired water quality for selenium standards that are not currently being met. As a result, water quality is not considered to be meeting Land Health Standard 5. Additional water quality monitoring and Total Daily Maximum Load (TDML) development by the State of Colorado is given medium priority at this time. Livestock grazing is not typically considered a source of water quality impairments related to selenium, which is predominantly related to surface geology. Therefore, implementation of the proposed livestock grazing is not anticipated to substantially degrade water quality from current conditions, if best management practices and mitigations are followed.

WETLANDS AND RIPARIAN ZONES

Affected Environment.

Wetlands and riparian areas are defined as ecosystems that occur around watercourses and water bodies. They occupy the transitional zone between wet and dry ecosystems and require more water than adjacent upland plant communities. These areas make up a relatively small portion of the landscape, but provide some of the most productive wildlife habitat and forage for livestock (USDI 2006). Riparian areas also provide important ecological functions such as ground-water storage, water quality enhancement and erosion control.

Healthy riparian areas are reflected in the vigor and composition of the vegetation. Late seral vegetation has deep and extensive root structures that stabilize stream banks and shorelines, and trap sediment that cleans and filters water. Decaying organic matter mixes with sediments creating a sponge that is penetrated by root masses as it stores water which is then slowly released back into the stream attenuating water flow and mitigating drought effects. The retention of water benefits adjacent plant communities as localized water tables rise. The aggraded sediments are colonized by additional riparian plants. As the banks build up, the creek channels narrow and deepen and become covered with overhanging vegetation that shades and cools the slower flowing water. Residual plant material at the end of the growing season benefits water retention by capturing snow that later melts to provide additional water to riparian areas. A healthy riparian system slows the departure of water from the landscape creating conditions right for biological successional processes to occur that benefit plant and animal life.

Proper Functioning Condition Assessment. The Proper Functioning Condition (PFC) assessment evaluates most of the indicators listed for healthy riparian systems as described in the Colorado Standards for Public Land Health. On the basis of hydrology, vegetation and soil erosion/deposition attributes and processes (USDI 2015), the interdisciplinary team places the riparian area in one of five possible ratings: Proper Functioning Condition (PFC), Functioning at Risk with an Upward Trend (FAR-Up), Functioning-At-Risk with No Apparent trend (FAR-NA), Functioning at Risk with a Downward Trend (FAR-Down), and Nonfunctional (NF).

Table 13 below lists the known riparian areas for the allotments under this permit renewal and the results of proper functioning condition (PFC) assessments.

Table 13. Riparian Proper Functioning Condition Assessment Data.

Allotment	Riparian Area	Year Assessed	Miles	Condition Rating
Couey 1	West Mamm Creek	2009	0.3	**PFC**
Couey 2	There are no known riparian areas within this allotment			
Dry Hollow Reservoir Gulch	Alkali Creek	2009	0.9	**PFC**
	Dry Hollow	2015	2.4	**FAR-Down**
	East Mamm Creek		1.2	**PFC**
Middle Mamm	Middle Mamm Creek	2015	0.9	**PFC**

West Mamm Creek (0.3 mile) flows through the Couey 1 Allotment. Highly erosive soils in the watershed and flashy run-off events limit this stream's potential and have contributed to significant down-cutting of the channel in the past. Also there is an irrigation diversion structure near the upper end of the public land reach which alters the natural flow. Despite these constraints, a new floodplain is beginning to form and woody riparian vegetation is establishing on point bars. There is an unnamed intermittent stream just south of West Mamm Creek that is in good condition with well-established herbaceous and shrubby riparian vegetation.

The Couey 2 Allotment does not contain any known wetland or riparian resources.

The Dry Hollow Reservoir Gulch Allotment contains riparian zones along Alkali Creek, Dry Hollow, and East Mamm Creek.

Alkali Creek, Dry Hollow Gulch, and East Mamm Creek are all influenced by erosive watersheds, flashy run-off, and high sediment loads. Past downcutting has occurred in each of these drainages, but a new floodplain is establishing in the entrenched channel with good recruitment of young cottonwoods. All three streams have water diversions which reduce water flows and Alkali Creek may actually run dry in summer, thus limiting the extent of the riparian zone. With the flashy nature of run-off, the stream banks periodically get scoured, resulting in loss of riparian vegetation, vertical banks on outside meanders and downcutting of the channel. Given these limiting factors, Alkali Creek and East Mamm Creek are considered to be properly functioning based on their potential.

In the 2015 riparian PFC assessment, Dry Hollow showed evidence of bank trampling and heavy browsing of riparian shrubs, thus reducing the vigor of riparian vegetation and preventing the development of deep root systems that could better stabilize the stream. Upland terraces adjacent to the stream were also heavily utilized with excessive bare ground and a moderate infestation of houndstongue and other noxious weeds. The degraded terraces contribute to an elevated sediment load during run-off and storm events. As a result, the stream was rated as functioning-at-risk with a downward trend. Both livestock and wildlife use were considered to be contributing factors.

The Middle Mamm Allotment contains a riparian zone along Middle Mamm Creek. A 2015 PFC assessment rated the riparian zone as in proper functioning condition given its potential.

ENVIRONMENTAL CONSEQUENCES.

Direct impacts to stream conditions from livestock grazing include removal of forage (herbivory) and trampling damage. Indirect impacts from livestock grazing may also result in soil compaction and erosion. Poor grazing management practices can result in excessive utilization, soil compaction, bank shearing, or repeated defoliations that do not allow sufficient time for rest and recovery of plant species (Behnke and Raleigh 1978). Loss of photosynthetic plant material reduces the plant's physiological abilities to store root carbohydrates, grow elongated roots and produce shoots and seeds. Stressed plant species disappear from riparian plant communities, reducing age-class diversity, species composition, and cover, and are replaced by species more capable of exploiting stressed habitats. This is expressed in riparian plant composition changes from late seral woody and herbaceous plants to a community dominated by early seral riparian species such as redtop, or exotic, nonriparian species such as Kentucky bluegrass and dandelions or noxious weeds such as Canada thistle and houndstongue.

Livestock can compact soil by trampling it, making paths or repeatedly congregating in the same areas. This reduces the ability of riparian areas to absorb and hold water and breaks down streambanks (USDA 2006). Trampling may damage streambanks and create hummocks or pedestalling in the moist soil along creek beds and increase stream sedimentation and soil erosion.

Proposed Action. No changes in grazing management would occur on the Couey 1, Couey 2, and Middle Mamm Allotments and impacts would be the same as the No Action Alternative described below. For the Dry Hollow Reservoir Gulch Allotment, the permitted summer and fall use would temporarily be suspended until an AMP could be completed and implemented that would require construction and maintenance of additional fencing and upland water developments to ensure better livestock distribution to sustain the season-long use. Grazing on this revised

permit would occur for only 15 days in late spring as livestock trail through the allotment on their way to U.S. Forest Service allotments. In the spring, livestock are less likely to concentrate in riparian zones because vegetation in the uplands is succulent, actively growing, and high in nutritional quality. The short length of grazing use should allow for plenty of time for riparian vegetation recovery during the remainder of the growing season. Although stream banks would likely be damp and susceptible to trampling damage and compaction in the spring, the short period of use should minimize the extent of stream bank impacts. Riparian conditions would be expected to improve within the constraints of the stream's potential.

No Action Alternative. The grazing period of use on the Middle Mamm and Couey 1 allotments is relatively short which should allow ample grazing rest and recovery time for riparian plant species. There have been no issues documented with grazing use/management associated with these riparian areas. Consequently, no adverse impacts to these riparian areas are anticipated from continuation of the current grazing management.

There are no wetlands or riparian zones in the Couey 2 allotment and thus there would be no impacts to these resources as a result of the proposed action.

Under this alternative, grazing on the Dry Hollow Reservoir Gulch allotment would continue at past levels. The authorized period of grazing use is for 4.5 months (June 1 to Oct 15). If livestock congregate along creek bottoms, the potential exists for severe utilization and trampling of the riparian vegetation which can cause a decline in riparian condition (i.e. reduction in cover of riparian vegetation and a decrease in late-seral deep-rooted riparian vegetation). This is particularly true in this case where grazing could occur throughout the growing season which offers limited rest and recovery time for riparian plant species. It is unclear whether the authorized summer-long use has actually been occurring since grazing bills for the past few decades do not reflect summer use. However, during the 2015 PFC assessment, some trespass livestock were observed loafing on Dry Hollow. Woody riparian vegetation showed evidence of heavy browsing and trampling had caused some bank shearing. If the authorized season-long use were to occur, there would likely be further degradation of the riparian zone.

No Grazing Alternative. The absence of grazing would have limited effects on West Mamm and Middle Mamm Creeks since little livestock grazing use has been documented on these creeks. Removing livestock grazing from the Dry Hollow Reservoir Gulch allotment may result in some improvement in the condition of the riparian zone along Dry Hollow since browsing and trampling damage appear to be degrading riparian conditions at present. Without the presence of livestock, riparian vegetation cover would likely increase and late-seral riparian vegetation would begin to establish. However, the stream may also receive substantial big game use in winter and early spring which may affect the ability of the stream to improve. Also, given the flashy nature of run-off in this watershed, the potential for establishing and maintaining healthy riparian vegetation may be limited.

ANALYSIS OF PUBLIC LAND HEALTH STANDARD 2 FOR RIPARIAN SYSTEMS.

Given the potential of the perennial streams on these four allotments, Standard 2 for riparian systems is currently being met on all streams except Dry Hollow Gulch. Dry Hollow Gulch was recently rated as functioning-at-risk with a downward trend. The proposed action with the

implementation of the terms and conditions on the permit would likely continue to maintain Standard 2 on those streams currently at PFC and would likely move towards meeting the Standard on Dry Hollow Gulch, provided no unauthorized summer grazing occurs.

AQUATIC WILDLIFE AND FISHERIES (INCLUDING SENSITIVE, THREATENED, AND ENDANGERED SPECIES)

AFFECTED ENVIRONMENT.

Table 14 summarizes Federally listed, proposed and candidate aquatic wildlife species potentially occurring in Garfield County (USFWS 2015) and species on the Colorado BLM State Director's Sensitive Species List (BLM 2015b) that may occur in the allotments.

Table 14. Special Status Aquatic Wildlife Species Summary.

Federally Listed, Proposed or Candidate Aquatic Wildlife Species		
Species and Status	**Habitat/Range Summaries**	**Occurrence/ Potentially Impacted**
Green lineage cutthroat trout *(Oncorhynchus clarki stomias)* Threatened	The greenback cutthroat trout is the subspecies of cutthroat trout native to the Platte River drainage on the Eastern Slope of Colorado. The USFWS is advising federal agencies to consider green lineage cutthroat trout on the Western Slope of CO as threatened until such time as review and interpretation of recent genetics and meristic research has been completed.	Absent/No
Colorado pikeminnow *(Ptychocheilus lucius)* Endangered	Primarily exists in the Green River below the confluence with the Yampa River, the lower Duchesne River in Utah, the Yampa River below Craig, Colorado, the White River from Taylor Draw Dam near Rangely downstream to the confluence with the Green River, the Gunnison River in Colorado, and the Colorado River from Palisade, Colorado, downstream to Lake Powell. Colorado pikeminnow populations in the upper Colorado River basin are now relatively stable or growing. Designated Critical Habitat includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent /No
Razorback sucker *(Xyrauchen texanus)* Endangered	The razorback sucker was once widespread throughout most of the Colorado River Basin from Wyoming to Mexico. In the upper Colorado River Basin, they are now found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction. Because so few of these fish remain in the wild, biologists have been actively raising them in hatcheries in Utah and Colorado and stocking them in the Colorado River. Designated Critical Habitat for the razorback sucker includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent /No
Colorado BLM Sensitive Aquatic Wildlife Species Present or Potentially Present in the Project Area		
Species	**Habitat/Range Summaries**	**Occurrence/ Potentially Impacted**
Northern leopard	Generally found in wet meadows and in shallow lentic habitats between 3,500	Possible/No

frog (*Rana pipiens)*	to 11,000 feet. They require year-round water sources deep enough to provide ice free refugia in the winter. Within the CRVFO, this species has been documented in locales where quality riparian vegetation exists in conjunction with perennial water sources. Larger populations have been documented northwest of King Mountain within the small drainage that feeds King Mountain (Ligon) Reservoir, June Creek and East Divide Creek south of Silt, and in portions of the Rifle Creek watershed north of Rifle. No populations have been identified in the allotments.	
Boreal toad (*Bufo boreas boreas*)	Occurs between 7,000-12,000 feet in the Southern Rocky Mountains in the vicinity of mountain lakes, ponds, meadows, and wetlands in subalpine forest (e.g., spruce, fir, lodgepole pine, aspen). Adults often feed in meadows and forest openings near water, but sometimes in drier forests. Restricted to areas with suitable breeding habitat in spruce-fir forests and alpine meadows. Breeding habitat includes lakes, marshes, ponds, and bogs with sunny exposures and quiet, shallow water. The only known sightings in the Divide Creek Watershed have been on USFS lands. Suitable habitat on BLM lands in the watershed is very limited.	Absent/No
Bluehead sucker (*Catostomus discobolus*) , Flannelmouth sucker (*Catostomus latipinnis), and* Roundtail chub (*Gila robusta)*	Primarily found in larger rivers, but may also be found in smaller tributaries with good connectivity to larger river systems. These fish are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary streams. Given their biology, feeding habits, habitat needs, and niche in the ecosystem, these species can persist in the face of actions that increase sediments to streams and rivers containing these species.	Absent/No
Mountain sucker (*Catostomus platyrhynchus*)	Found primarily in small, low- mid elevation streams in northwestern Colorado with gravel, sand or mud bottoms. They inhabit undercut banks, eddies, small pools, and areas of moderate current. Young fish prefer backwaters and eddies. Within the CRVFO, the only known occurrence is in Piceance Creek.	Absent/No
Colorado River cutthroat trout (CRCT) (*Oncorhynchus clarkii pleuriticus)*	Prefers clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover. CRCT occur in Trapper Creek, Northwater Creek, East Fork Parachute Creek, and JQS Gulch.	Absent/No

AFFECTED ENVIRONMENT.

Fish. The only fish bearing streams documented in the allotments are West Mamm Creek in the Couey 1 Allotment, East Mamm Creek in the Dry Hollow Reservoir Gulch Allotment, and Middle Mamm Creek in the Middle Mamm Allotment. These creeks are all limited by flow and are only known to support speckled dace (*Rhinichthys osculus*) and suckers. Alkali Creek and Dry Hollow, both in the Dry Hollow Reservoir Gulch Allotment, are perennial streams limited by flow that are not known to support fish. An unnamed intermittent stream south of West Mamm Creek is in good condition with well-established vegetation.

Amphibians. Amphibians in Colorado need access to ponds, lakes, seeps, springs, or other bodies of water. They avoid cold winter temperatures and dry midday summer heat by taking refuge in buffered microenvironments such as underground burrows, crevices beneath rocks, or bodies of water. Amphibian records within the CRVFO are limited, and extensive surveys have not been conducted, but

the following species are known to occur in the CRVFO. Boreal toads and northern leopard frogs, both BLM sensitive species, have not been documented on the allotments. Western chorus frogs (*Pseudacris triseriata*) and Woodhouse's toads (*Bufo woodhousii*) occur throughout Colorado. Western chorus frogs are found primarily in wetland marshes and pond margins, also including seasonal waters, and across a wide range of elevations. Woodhouse's toads are present in ponds and slow-flowing streams, including seasonal waters, below 7,000 feet in Colorado. Great Basin spadefoot toads in Colorado generally breed in temporary pools and flood waters along perennial steams. They typically inhabit pinyon-juniper woodlands, sagebrush, and semi-desert shrublands, mostly below 6,000 feet in elevation. Tiger salamanders (*Ambystoma tigrinum*) occur throughout Colorado near ponds, lakes, and water impoundments up to 12,000 feet in elevation (Hammerson 1999).

Aquatic Macroinvertebrates. Aquatic habitats within the allotments support aquatic macroinvertebrates, which are organisms without backbones that are visible to the naked eye. They live on, under, and around rocks and sediment in the bottoms of lakes, rivers, and streams for at least part of their life cycles. Major groups include arthropods (i.e., crustaceans and insects), mollusks, sponges and nematode worms. The most abundant are typically aquatic insect larvae such as mayflies, stoneflies, and caddis flies. Aquatic insects are good indicators of stream health, and are an important link in the aquatic food chain, particularly as a food source for fish, amphibians, and many terrestrial animals such as birds and bats. A lack of adequate aquatic invertebrates can negatively impact fish productivity.

ENVIRONMENTAL CONSEQUENCES.

Livestock can alter stream banks through shearing and compaction by walking along and crossing streams, which can increase sediment loading. Livestock grazing can also alter riparian vegetation structure, composition, and function. Impacts to aquatic wildlife are dependent on grazing management (e.g., livestock type and numbers, timing, frequency, and intensity). Riparian areas and aquatic species are especially vulnerable to negative habitat changes because riparian areas are limited and often fragmented. Year-long and summer grazing can be particularly damaging to riparian vegetation, whereas late fall and winter grazing occurs when water levels are low, stream banks are dry, and vegetation is dormant, thus minimizing the effects of grazing (Kauffman and Krueger 1984). A livestock management strategy that incorporates rest periods and movement of animals through different pastures is usually more desirable for protecting aquatic wildlife habitat than season-long grazing.

Proposed Action. The summer grazing schedule (i.e., 6/16 to 10/15) on the Dry Hollow Reservoir Gulch Allotment would be temporarily suspended until an AMP is developed and appropriate infrastructure installed that would make the summer use feasible (e.g., fencing, pond maintenance, potential new water sources to hold livestock on the allotment and out of riparian areas). This would minimize negative impacts from livestock grazing to aquatic wildlife habitats.

There would be no changes to grazing management on the Couey 2 Allotment, which does not contain any known wetland or riparian resources. Grazing management would remain the same on the Couey 1 and Middle Mamm Allotments, where streams are considered to be properly functioning based on their potential and no issues with grazing management negatively impacting aquatic habitats have been documented.

No Action Alternative. Grazing would continue to be permitted at past levels. Grazing in the Dry Hollow Reservoir Gulch Allotment would be permitted from 6/16 to 10/15 without the development of an AMP or installation of appropriate infrastructure to make this use feasible. Potential negative impacts to aquatic habitats within that allotment would be greatest under this alternative. Impacts to aquatic habitats on the Couey 1, Couey 2, and Middle Mamm allotments would be the same as the under the Proposed Action.

No Grazing Alternative. These grazing permits would be cancelled. Livestock grazing would not be authorized on the Couey 1 and Couey 2 Allotments. Other existing grazing permits would still be authorized on the other allotments (see Table 3). There would be no direct or indirect impacts to fish or other aquatic wildlife or their habitats from livestock use on the Couey 1 and Couey 2 Allotments, and impacts would be reduced on the Middle Mamm and Dry Hollow Reservoir Gulch Allotments. Riparian vegetation biomass would likely increase over time in the absence of or with reduced numbers of livestock. The diversity and density of aquatic wildlife would be balanced with other land uses and habitat/landscape potential on the Couey 1 and Couey 2 Allotments.

ANALYSIS OF PUBLIC LAND HEALTH STANDARD 3 FOR AQUATIC WILDLIFE AND FISHERIES.

Given the potential of the perennial steams in these allotments, known constraints, and stream and riparian habitat condition, Standard 3 was being met for aquatic wildlife when assessed for the Divide Creek Land Health Assessment (BLM 2009). Under the Proposed Action, conditions would be expected to remain the same on the Couey 1, Couey 2, and Middle Mamm Allotments, so Standard 3 should continue to be met. Temporarily suspending a grazing permit that would allow livestock grazing from 6/16 to 10/15 until an AMP is developed and appropriate infrastructure is installed would minimize potentially negative impacts to aquatic wildlife and their habitats, which would support the continued achievement of Standard 3 on this allotment. Based on the lack of suitable habitat for special status aquatic wildlife in these allotments, the Proposed Action would have no impact on a special status aquatic wildlife and Standard 4 would not apply.

MIGRATORY BIRDS

AFFECTED ENVIRONMENT.

The Migratory Bird Treaty Act (MBTA) provides protections to native birds, with the exception of certain upland fowl managed by state wildlife agencies for hunting. Within the context of the MBTA, migratory birds include non-migratory resident species as well as true migrants. For most migrant and resident species, nesting habitat is critical for supporting reproduction in terms of both nest sites and food. Also, because birds are generally territorial during the nesting season, their ability to access and utilize sufficient food is limited by the quality of the occupied territory. During non-breeding seasons, birds are generally non-territorial and able to feed across a larger area and wider range of habitats.

The project area provides cover, forage, breeding, and/or nesting habitat for a variety of migratory birds that summer, winter, or migrate through the area. Migratory bird species that are federally listed and classified by the BLM as sensitive species are addressed in the Wildlife: Sensitive, Threatened, and Endangered Species section of this EA.

BLM Instruction Memorandum No. 2008-050 provides guidance toward meeting the BLM's responsibilities under the MBTA and the Executive Order 13186. The guidance directs Field Offices to promote the maintenance and improvement of habitat quantity and quality and to avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.

The MBTA prohibits the "take" of a protected species. Under the Act, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS interprets "harm" and "kill" to include loss of eggs or nestlings due to abandonment or reduced attentiveness by one or both adults as a result of disturbance by human activity, as well as physical destruction of an occupied nest.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." The *Birds of Conservation Concern 2008* (USFWS 2008) is the most recent effort to carry out this mandate. The CRVFO is within the Southern Rockies/Colorado Plateau Bird Conservation Region 16.

The project area includes the following plant communities and potentially associated migratory bird species.

Pinyon-juniper Woodlands. Pinyon and juniper trees provide food, cover and nest sites for numerous migratory birds. Species on the Birds of Conservation Concern (BCC) list that occur in the CRVFO and are associated with pinyon-juniper woodlands include the pinyon jay (*Gymnorhinus cyanocephalus*), juniper titmouse (*Baeolophus ridgwayigra*) and Ferruginous Hawk *(Buteo regalis).* Other migratory species associated with this plant community within the CRVFO include the broad-tailed hummingbird (*Selasphorus platycercus*), black-chinned hummingbird (*Archilochus alexandri*), Say's phoebe (*Sayornis saya*), ash-throated flycatcher *(Myiarchus cinerascens),* gray flycatcher (*Empidonax wrightii),* Townsend's solitaire (*Myadestes townsendi*), American robin (*Turdus migratorius*), Western bluebird *(Sialia Mexicana),* mountain bluebird (*S. currucoides*), bushtit *(Psaltriparus mininus),* blue-gray gnatcatcher (*Polioptila caerulea*), plumbeous vireo (*Vireo plumbeus*), Western scrub-jay (*Aphelocoma californica*), Clarks's nutcracker (*Nucifraga columbiana*), black-throated gray warbler (*Dendroica nigrescens*), Virginia's warbler (*Oreothlypis virginiae*), chipping sparrow (*Spizella passerina*), lesser goldfinch (*Spinus psaltria*) and house finch (*Haemorhous mexicanus*). Winter visitors to pinyon-juniper habitats include the Cassin's finch (*Carpodacus cassinii*), a BCC species, which typically nests in montane and subalpine forests, though occasionally nests in pinyon-juniper woodlands.

Sagebrush Shrublands. Sagebrush and the associated native perennial grasses and forbs provide food, cover and nest sites for migratory birds. Sagebrush obligates that potentially occur in the

CRVFO include the sagebrush sparrow (*Artemisiospiza nevadensis*), sage thrasher *(Oreoscoptes montanus)* and Brewer's sparrow (*Spizella breweri*), a BCC species. Other migratory species associated with sagebrush shrublands within the CRVFO include the western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), green-tailed towhee (*Pipilo chlorurus*), vesper sparrow (*Pooecetes gramineus*) and lark sparrow *(Chondestes grammacus).* Some species are associated with both pinyon-juniper woodlands and sagebrush shrublands, including the Say's phoebe and gray flycatcher.

Mixed Mountain Shrublands. The vegetation of mixed mountain shrublands varies substantially depending on elevation, slope, aspect, and soil. More mesic (moist) sites such as on north-facing slopes and along minor drainages are typically dominated by Gambel's oak and serviceberry, while more xeric (dry) sites such as south-facing slopes are typically dominated by mountain-mahogany, bitterbrush, snowberry, and sagebrush. The dense cover, tall height, and abundant acorns and berries of mesic oak-serviceberry stands provide cover, forage, and nesting habitat for numerous species including spotted towhees (*Pipilo maculatus*), Virginia's warblers (*Oreothlypis virginiae*), black-headed grosbeaks (*Pheucticus melanocephalus*), black-billed magpies (*Pica hudsonia*), broad-tailed hummingbirds (*Selasphorus platycercus*), green-tailed towhees (*Pipilo chlorurus*), mourning doves (*Zenaida macroura*), Western scrub-jays (*Aphelocoma californica*) and lazuli buntings (*Passerina amoena*).

Riparian Woodlands and Shrublands. Riparian woodlands consisting primarily of linear stands of cottonwoods along major streams and aspen, willows, and other tall shrubs along smaller streams provide cover, feeding, and nesting habitats for a much greater number of species and individuals than adjacent vegetation communities due to the vertical and horizontal diversity of the community, the proximity to water, and typically the proximity to other vegetation communities. Forbs and insects can be more abundant in moist areas. Bird species found in cottonwood forests in the CRVFO include three BCC species: the bald eagle (*Haliaeetus leucocephalus*), Lewis's woodpecker (*Melanerpes lewis*) and willow flycatcher (*Empidonax traillii*). Other migrants include the cordilleran flycatcher (*Empidonax occidentalis*), warbling vireo, house wren, Bullock's oriole (*Icterus bullockii*), yellow warbler (*Dendroica petechia*), and American goldfinch (*Carduelis tristis*) in cottonwood woodlands and the willow flycatcher (*Empidonax traillii*), song sparrow (*Melospiza melodia*) and fox sparrow (*Passerella iliaca*) in willow shrublands. Raptors commonly associated with cottonwood woodlands include the red-tailed, Cooper's, and sharp-shinned hawks, the great horned owl (*Bubo virginiana*) and the long-eared owl (*Asio otus*). A large wading bird, the great blue heron (*Ardea herodias*), nests singly or colonially in mature cottonwoods and may travel several miles to hunt for fish in streams, ponds, and lake margins.

Raptors. Many raptors forage over wide areas, so even if they aren't known to nest in a specific area, they may still fly over searching for food. Raptors on the BCC list that occur in portions of the CRVO include the golden eagle *(Aquila chrysaetos),* Bald Eagle *(Haliaeetus leucocephalus),* Ferruginous Hawk *(Buteo regalis),* prairie falcon *(Falco mexicanus),* peregrine falcon *(F. peregrinus)* and flammulated owl *(Psiloscops flammeolus).* Prairie falcons nest on rocky ledges and cliffs and hunt in grasslands and semi-desert shrublands. Peregine falcons hunt near nest sites and along rivers and lakes, but can be found in nearly any open vegetation community during migration and winter. Flammulated owls typically nest in ponderosa pine and aspen forests, but have been found nesting in mixed forests, and reportedly use old-growth pinyon-juniper woodlands.

A variety of raptors not on the BCC list are known to occur in the CRVO including the American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), red-tailed hawk *(Buteo jamaicensis)*, long-eared owl (*Asio otus*), great horned owl *(Bubo virginianus),* northern pygmy owl (*Glaucidium gnoma*) and northern saw-whet owl (*Aegolius acadius).* The northern goshawk (*Accipiter gentilis*), a BLM sensitive species, is an occasional winter visitor to pinyon-juniper woodlands from its nesting habitat in montane and subalpine forests.

ENVIRONMENTAL CONSEQUENCES.

Livestock grazing can alter vegetation structure, composition, and function. Effects on migratory birds are dependent on the species of interest and may be adverse or beneficial depending on grazing timing, frequency, and intensity. Aerial, bark and canopy insectivores may be less influenced by grazing than species feeding on nectar, insects, or seeds in the understory or on the ground. Birds may be displaced as a result of grazing. Trampling of nests, eggs, or young could occur. Losses or decreases in vegetation from overgrazing can decrease rodent prey species and affect local populations of raptors. Areas lacking vegetative structure and complexity would be expected to be lacking bird species richness. This is especially important in riparian areas, which provide habitat for many species in the arid and semiarid west, including upland birds, waders, shorebirds, raptors, neotropical migrants and passerines. Migratory birds could be temporarily displaced from vehicular traffic or human presence during maintenance of infrastructure or tending to livestock. As long as acceptable utilization levels are maintained and land health standards are achieved, any negative impacts to migratory birds from livestock grazing are expected to be minimal and isolated, and should not influence migratory bird populations on a landscape level.

Proposed Action. Grazing management would remain the same on the Couey 1, Couey 2, and Middle Mamm Allotments. The summer grazing schedule (i.e., 6/16-10/15) on the Dry Hollow Reservoir Gulch Allotment would be temporarily suspended until an AMP is developed and appropriate infrastructure installed that would make the summer use feasible (e.g., fencing, pond maintenance, potential new water sources to hold livestock on the allotment and out of riparian areas). This would minimize negative impacts to migratory birds from livestock grazing, particularly in riparian areas.

No Action Alternative. Grazing would continue to be permitted at past levels. Grazing in the Dry Hollow Reservoir Gulch Allotment would be permitted from 6/16 to 10/15 without the development of an AMP or installation of appropriate infrastructure to make this use feasible. Potential negative impacts to migratory birds within that allotment would be greatest under this alternative. Impacts to migratory birds on the Couey 1, Couey 2, and Middle Mamm allotments would be the same as the under the Proposed Action.

No Grazing Alternative. These grazing permits would be cancelled. Livestock grazing would not be authorized on the Couey 1 and Couey 2 Allotments. Other existing grazing permits would still be authorized on the other allotments (see Table 3). There would be no direct or indirect impacts to migratory birds from livestock use on the Couey 1 and Couey 2 Allotments, and impacts would be reduced on the Middle Mamm and Dry Hollow Reservoir Gulch Allotments. Perennial grass and forb cover should increase and riparian vegetation should recover over time in

the absence of livestock, thereby improving conditions for many migratory birds. There would also be no disturbance to migratory birds from vehicular traffic or human presence during maintenance of infrastructure or tending to livestock on the Couey 1 and Couey 2 allotments.

Analysis of Public Land Health Standards 3 and 4 for Migratory Birds.

Based on the Divide Creek Land Health Assessment (BLM 2009), Standard 3 was being met for terrestrial wildlife including migratory birds. Under the Proposed Action, conditions would be expected to remain the same on the Couey 1, Couey 2, and Middle Mamm allotments, so Standard 3 should continue to be met. Temporarily suspending a grazing permit that would allow livestock grazing from 6/16 to 10/15 until an AMP is developed and appropriate infrastructure is installed would minimize potentially negative impacts to migratory birds and their habitats, which would support the continued achievement of Standard 3 on this allotment.

SENSITIVE, THREATENED AND ENDANGERED TERRESTRIAL WILDLIFE

Affected Environment.

Table 15 summarizes Federally listed, proposed and candidate terrestrial wildlife species potentially occurring in Garfield County (USFWS 2015) and species on the Colorado BLM State Director's Sensitive Species List (BLM 2015b) that may occur in the allotments.

Table 15. Special Status Terrestrial Wildlife Species.

Federally Listed, Proposed, or Candidate Terrestrial Wildlife Species		
Species and Status	**Habitat/Range Summaries**	**Occurrence/ Potentially Impacted**
Canada lynx (*Lynx Canadensis)* Threatened	Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base. In the western US, lynx are associated with mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation. Although snowshoe hares (*Lepus americanus*) are the preferred prey, lynx also feed on mountain cottontails (*Sylvilagus nuttallii*), pine squirrels (*Tamiasciurus hudsonicus*), and blue grouse (*Dendragapus obscurus*). The Forest Service has mapped suitable denning, winter, and other habitat for lynx within the White River and Routt National Forests. The mapped suitable habitat comprises areas known as Lynx Analysis Units (LAUs) that are the approximate size of a female's home range. Several LAUs include small parcels of BLM lands. There are no LAUs or mapped lynx linkage areas in the project area.	Absent/No
Mexican spotted owl *(Strix occidentalis lucida)* Threatened	This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The key habitat components are old-growth forests with uneven-age stands, high canopy closure, high tree density, fallen logs and snags. The only extant populations in Colorado are in the Pikes Peak and Wet Mountain areas of south-central Colorado and the Mesa Verde area of southwestern Colorado.	Absent/No

Yellow-billed cuckoo *(Coccyzus americanus)* Threatened	This secretive species occurs in mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction. There is no proposed critical habitat in the Colorado River Valley Field Office.	Absent/No
Colorado BLM Sensitive Terrestrial Wildlife Species Present or Potentially Present in the Project Area		
Species	**Habitat/Range Summaries**	**Occurrence/ Potentially Impacted**
Townsend's big-eared bat (*Corynorhinus townsendii*) Fringed myotis (*Myotis thysanodes)* Spotted bat *(Euderma maculatum)*	Townsend's big eared bats and fringed myotis occur as scattered populations at moderate elevations on the western slope of Colorado. Habitat associations are not well defined. Both bats wil forage for aerial insects over pinyon-juniper, montane conifer and semi-desert shrubland communities. These species roosts in caves, rock crevices, mines, buildings and tree cavities. Both species are widely distributed and usually occur in small groups. Townsend's big-eared bats are not abundant anywhere in its range due to patchy distribution and limited availability of suitable roosting. Spotted bats have been detected in Colorado in ponderosa pine woodlands or montane forests, pinyon-juniper woodlands, and riparian vegetation; over sand and gravel bars; and in open semidesert shrublands. The species needs access to water and suitable cracks and crevices in rocky cliffs for roosting. Limited information is available for this species in the CRVFO. No roosts or hibernaculum for any of these species are documented in the project area.	Possible/No
Rocky mountain bighorn sheep *(Ovis canadensis)*	Rocky Mountain bighorn sheep typically inhabit steep, precipitous mountain and canyon terrain with good visibility and escape terrain. The CRVFO includes the Glenwood Canyon, Derby Creek, Deep Creek and Battlement Mesa herds. Additional herds inhabit nearby USFS lands.	Absent/No
Northern goshawk (*Accipter gentilis)*	Montane and subalpine coniferous forests and aspen forests; may move to lower elevation pinyon-juniper woodlands in search of prey during winter. Preys on small-medium sized birds and mammals. Breeds in coniferous deciduous and mixed forests. Nests are typically located on a northerly aspect in a drainage or canyon and are often near a stream. Nest areas contain one or more stands of large, old trees with a dense canopy cover. A goshawk pair occupies its nest area from March until late September. The nest area is the center of all movements and behaviors associated with breeding from courtship through fledging.	Possible Fall-Winter/No
Ferruginous hawk (*Buteo regalis*)	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Fall/ winter resident, non-breeding.	Possible Fall-Winter/No
Golden eagle *(Aquila chrysaetos)*	Nesting/Roosting: cliffs and trees. Forages widely over open habitats, including grasslands and sagebrush, particularly in areas with abundant rabbits. Suitable mixes of sagebrush and cliffs can support high concentrations. Primary forages include small rodents, hares, and rabbits, and carrion during winter.	Possible/No
Bald eagle (*Haliaeetus leucocephalus*)	Nesting/Roosting: mature cottonwood forests along rivers. Foraging: fish and waterfowl along rivers and lakes; may feed on carrion, rabbits and other foods in winter. No nesting or roosting sites are documented in the allotments. No summer or winter forage areas are mapped in the allotments.	Possible/No

American Peregrine Falcon *(Falco peregrinus anatum)*	Rare spring and fall migrant in western valleys. Peregrine falcons inhabit open spaces associated with high cliffs and bluffs overlooking rivers. The falcon nests on high cliffs and forages over nearby woodlands. No nesting or potential nesting areas are mapped in the allotments.	Possible/No
Greater Sage-grouse (*Centrocercus urophasianus)*	Sage-grouse are found only in areas where sagebrush is abundant, providing both food and cover. Sage-grouse prefer relatively open sagebrush flats or rolling sagebrush hills. In winter, sagebrush accounts for 100% of the diet for these birds. It also provides important escape cover and protection from the elements. Within the CRVFO, sage-grouse are present in the northeast part of the Field Office in the Northern Eagle/Southern Routt population. While small (<500 birds), this population probably has, or had, a relationship with the larger population in Moffat, Rio Blanco and western Routt counties, and probably with the Middle Park population to the east. There are no documented leks or lands allocated as priority habitat management areas (PHMA) or general habitat management areas (GHMA) in the allotments.	Absent/No
Columbian sharp-tailed grouse (*Tympanuchus phasianellus columbian*)	Use a variety of habitats within sagebrush, mountain shrub, and riparian areas. From spring to fall a component of denser riparian or mountain shrub vegetation is important for escape cover. Winter habitat contains a dominant component of deciduous trees and shrubs. In Colorado, leks typically occur in sagebrush.	Absent/No
Black swift *(Cypseloides niger)*	Nest in colonies on vertical rock faces, near waterfalls or in dripping caves. Birds arrive in Colorado in June and take all summer to raise a single nestling. Adults forage widely on aerial insects.	Absent/No
Brewer's sparrow (*Spizella berweri*)	Summers in western Colorado mountain parks and is a spring/fall migrant at lower elevations. Sagebrush obligate with an apparently secure conservation status in Colorado. Primary habitat is mature big sagebrush 1.6-3 ft. tall with low to moderate canopy cover, and habitat patches ≥15 acres. Mesic sites, particularly riparian areas within sagebrush habitats, are also an important primary habitat component.	Possible/Yes
Midget faded rattlesnake *(Crotalus viridis concolor)*	Found in northwestern Colorado, including western Garfield County. Sagebrush communities with an abundance of south-facing rock outcroppings and exposed canyon walls. Rocky outcrops are essential for cover, variable thermal conditions and hibernation.	Possible/No

There is no critical habitat, occupied habitat, or known occurrences for any Federally listed, proposed or candidate terrestrial wildlife species in the project vicinity.

Brewer's Sparrow. Surveys have not been conducted on these allotments. Alteration of vegetation in sagebrush habitats due to livestock grazing may affect Brewer's sparrow abundance. Grazing may occasionally affect Brewer's sparrow nests through trampling or disturbance (Vasquez 2005).

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. *All Allotments.* Livestock grazing can alter vegetation structure, composition, and function. The response of BLM sensitive species to livestock grazing varies by habitat, species, and grazing (e.g., numbers, timing, frequency, intensity). Direct impacts include the removal and/or trampling of vegetation that would otherwise be used for food and cover; trampling of nests, eggs, or young; and livestock-wildlife interactions that may result in wildlife displacement or disease transmission. Wildlife could be displaced by vehicular traffic or human presence during maintenance of infrastructure or tending to livestock. Indirect impacts result from changes in plant community composition, structure, and productivity which together largely

determine the suitability of wildlife habitat and habitat for insect and rodent prey species. Conversely, livestock grazing can have a beneficial effect on forage quality by removing the rough or dried seedheads and stems, while leaving or creating the more palatable leaves. A management strategy that incorporates rest periods and movement of livestock through different pastures is generally more desirable for plant growth and protecting BLM sensitive species habitat than season-long grazing.

Grazing management would remain the same on the Couey 1, Couey 2, and Middle Mamm Allotments. The summer grazing schedule (i.e., 6/16-10/15) on the Dry Hollow Reservoir Gulch Allotment would be temporarily suspended until an AMP is developed and appropriate infrastructure installed that would make the summer use feasible (e.g., fencing, pond maintenance, potential new water sources to hold livestock on the allotment and out of riparian areas). This would minimize any negative impacts to BLM sensitive species potentially using the allotment from livestock grazing, particularly in riparian areas. As long as acceptable utilization levels are maintained and land health standards are achieved, any negative impacts to BLM sensitive species from livestock grazing are expected to be minimal and isolated, and should not influence populations on a landscape level.

No Action Alternative. *All Allotments.* Grazing would continue to be permitted at past levels. Grazing in the Dry Hollow Reservoir Gulch Allotment would be permitted from 6/16 to 10/15 without the development of an AMP or installation of appropriate infrastructure to make this use feasible. Potential negative impacts to special status wildlife potentially using the allotment would be greatest under this alternative. Impacts to BLM sensitive species on the Couey 1, Couey 2, and Middle Mamm allotments would be the same as the under the Proposed Action.

No Grazing Alternative. *All Allotments.* These grazing permits would be cancelled. Livestock grazing would not be authorized on the Couey 1 and Couey 2 Allotments. Other existing grazing permits would still be authorized on the other allotments (see Table 3). There would be no direct or indirect impacts to BLM sensitive species from livestock use on the Couey 1 and Couey 2 allotments, and impacts would be reduced on the Middle Mamm and Dry Hollow Reservoir Gulch allotments. Perennial grass and forb cover should increase and riparian vegetation should recover over time in the absence of livestock, thereby improving conditions for BLM sensitive species potentially using the allotments. There would also be no disturbance to BLM sensitive species from vehicular traffic or human presence during maintenance of infrastructure or tending to livestock on the Couey 1 and Couey 2 Allotments.

ANALYSIS OF PUBLIC LAND HEALTH STANDARD 4 FOR SPECIAL STATUS WILDLIFE.

Based on the Divide Creek Land Health Assessment (BLM 2009), Standard 4 was being met for BLM sensitive terrestrial wildlife species. There is no critical habitat, occupied habitat, or known occurrences for any Federally listed, proposed or candidate terrestrial wildlife species on these allotments. Under the Proposed Action, conditions would be expected to remain the same on the Couey 1, Couey 2, and Middle Mamm Allotments, so Standard 4 should continue to be met for BLM sensitive species. Temporarily suspending a grazing permit that would allow livestock grazing from 6/16 to 10/15 until an AMP is developed and appropriate infrastructure is installed would minimize potentially negative impacts to BLM sensitive species and their habitats, which would support the continued achievement of Standard 4 on this allotment.

TERRESTRIAL WILDLIFE

AFFECTED ENVIRONMENT.

Diverse plant communities across the CRVFO support a variety of terrestrial wildlife that summer, winter, or migrate through the area. Wildlife need to move across the landscape for food, cover and in response to seasonal conditions. Human development and activities have fragmented habitat, and in some cases, created barriers to wildlife movement. Factors contributing to wildlife disturbance or degradation and fragmentation of habitat include power lines, pipelines, fences, public recreation use, residential and commercial development, vegetation treatments, livestock and wild ungulate grazing, oil and gas development, fire suppression, roads and trails.

Big Game. Mule deer *(Odocoileus hemionus)* and Rocky Mountain elk *(Cervus elaphus nelsonii)* are recreationally important species that occur in the project area. These species typically occupy higher elevation, forested areas during summer and migrate to lower elevation sagebrush-dominated ridges and south-facing slopes during winter. Mule deer and elk summer range is mapped in at least portions of all allotments except for the Couey 1 Allotment. Elk winter range is mapped in at least portions of all allotments, and mule deer winter range is mapped in at least portions of all allotments except for the Couey 2 Allotment. Elk severe winter range and elk winter concentration areas are mapped in at least portions of all allotments except the Couey 2 Allotment. Winter range is often considered the most limiting habitat type for mule deer, so effective management of these areas is particularly important to the health of deer populations. The Couey 2 Allotment is partially mapped as an elk production area.

Moose tend to be found along riparian areas and in timbered areas, though they will cross semi-desert shrublands at times. All allotments at least partially overlap with mapped moose overall range. Moose rarely compete with livestock or other big game for forage as they forage primarily on willows (CDOW 2008).

Other Mammals. Numerous small mammals could reside within the planning area, including mice (*Peromyscus* spp.), woodrats (*Neotoma* spp.), ground squirrels *(Spermophilus* spp.*)*, chipmunks (*Neotamias* spp.), rabbits *(Sylvilagus* spp.), skunks *(Mephitis mephitis)*, raccoons *(Procyon lotor)* and porcupines (*Erethizon dorsatum*). Many of these mammals are prey for raptors and larger carnivores. Larger carnivores expected to occur include bobcats (*Lynx rufus*) and coyotes (*Canis latrans*). CPW has mapped the entire project area as mountain lion (*Felis concolor*) and black bear (*Ursus americanus*) habitat. Black bear fall concentration areas are mapped in portions of the Couey 2 and Dry Hollow Reservoir Gulch allotments. Mountain lions are most likely to be in the vicinity when mule deer are present. Bats documented in Northwest Colorado that could occur in the CRVFO that are not on the BLM special status species list include pallid bats (*Antrozous pallidus*), big brown bats (*Eptesicus fuscus*), silver-haired bats (*Lasionycteris noctivagans*), hoary bats (*Lasiurus cinereus*), California myotis (*Myotis californicus*), Western small-footed myotis (*M. ciliolabrum*), long-eared myotis (*M. evotis*), little brown myotis (*M. lucifugus*), long-legged myotis (*Myotis volans*), Yuma myotis (*M. yumanensis*), big free-tailed bats (*Nyctinomops macrotis*), canyon bats (*Parastrellus hesperus*), and Brazilian free-tailed bats (*Tadarida brasiliensis*).

Gallinaceous Birds. Game birds commonly found in the allotments include dusky grouse (*Dendragapus obscurus)* and wild turkey (*Meleagris gallopavo*). The dense cover, tall height and abundant acorns and berries of mesic oak-serviceberry stands provide cover, forage and nesting habitat for the wild turkey. All allotments are mapped as turkey overall range, turkey production areas are mapped in the Dry Hollow Reservoir Gulch and Couey 2 allotments, turkey winter range is mapped in all allotments except for the Couey 2 Allotment, and turkey winter concentration areas are mapped in the Couey 1 and Dry Hollow Reservoir Gulch allotments.

Waterfowl. Rivers, streams, reservoirs, ponds and associated riparian vegetation are used by a wide variety of waterfowl and shorebirds. Common species include great blue herons (*Ardea herodias*), Canada geese (*Branta canadensis*), mallards (*Anas platyrhynchos*), northern pintails (*A. acuta*), gadwalls (*A. strepera*) and American wigeon (*A. americana*).

Reptiles. Reptile species most likely to occur in the project area include sagebrush lizards (*Sceloporus graciosus*), prairie and plateau lizards *(S. undulatus)*, tree lizards *(Urosaurus ornatus)*, gopher snakes or bullsnakes (*Pituophis catenifer*), and western terrestrial garter snakes (*Thamnophis elegans*). Gopher snakes can be found throughout Colorado in most plant communities, including riparian areas, semidesert and mountain shrublands, pinyon-juniper woodlands, and ponderosa pine and other montane woodlands. Western terrestrial garter snakes occur throughout most of western Colorado, usually below 11,000 feet. Smooth green snakes (*Opheodrys vernalis*) can be present in riparian areas, but in western Colorado, may also be common in mountain shrublands far from water (Hammerson 1999).

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. *All Allotments.* Domestic livestock can compete with mule deer and elk for herbaceous forage, although moderate levels of grazing can also help promote shrub growth by limiting grasses. Conversely, livestock grazing can have a beneficial effect on forage quality by removing the rough or dried seedheads and stems, while leaving or creating the more palatable leaves for deer or elk to graze later in the season.

Because grazing management would not change on the Couey 1, Couey 2, and Middle Mamm Allotments, any impacts to terrestrial wildlife should remain the same. Temporarily suspending the summer grazing schedule on the Dry Hollow Reservoir Gulch Allotment until an AMP is developed and appropriate infrastructure is installed would minimize any negative impacts from livestock grazing to terrestrial wildlife, particularly in riparian areas. Mule deer and elk, as well as various other terrestrial wildlife, would likely use new water sources constructed for livestock.

No Action Alternative. *All Allotments.* Grazing would continue to be permitted at past levels. Grazing in the Dry Hollow Reservoir Gulch Allotment would be permitted from 6/16 to 10/15 without the development of an AMP or installation of appropriate infrastructure to make this use feasible. Potential negative impacts to special status wildlife potentially using the allotment would be greatest under this alternative. Impacts to BLM sensitive species on the Couey 1, Couey 2, and Middle Mamm allotments would be the same as the under the Proposed Action.

No Grazing Alternative. *All Allotments.* These grazing permits would be cancelled. Livestock grazing would not be authorized on the Couey 1 and Couey 2 Allotments. Other existing grazing permits would still be authorized on the other allotments (see Table 3). There would be no direct

or indirect impacts to terrestrial wildlife from livestock use on the Couey 1 and Couey 2 allotments, and impacts would be reduced on the Middle Mamm and Dry Hollow Reservoir Gulch allotments. Perennial grass and forb cover should increase and riparian vegetation should recover over time in the absence of livestock, thereby improving conditions for BLM sensitive species potentially using the allotments. There would also be no disturbance to terrestrial wildlife from vehicular traffic or human presence during maintenance of infrastructure or tending to livestock on the Couey 1 and Couey 2 Allotments. There would be no potential benefits to mule deer, elk, and other wildlife from new livestock waters on the Dry Hollow Gulch Allotment.

ANALYSIS OF PUBLIC LAND HEALTH STANDARD 3 FOR TERRESTRIAL WILDLIFE.

Based on the Divide Creek Land Health Assessment (BLM 2009), habitat condition was generally good and was meeting Standard 3 for terrestrial wildlife. Under the Proposed Action, conditions would be expected to remain the same on the Couey 1, Couey 2, and Middle Mamm allotments, so Standard 3 should continue to be achieved. Temporarily suspending a grazing permit that would allow livestock grazing from 6/16 to 10/15 until an AMP is developed and appropriate infrastructure is installed would minimize potentially negative impacts to terrestrial wildlife, which would support the continued achievement of Standard 3 on this allotment.

CUMULATIVE EFFECTS.

Soils and Water Quality. Cumulative impacts to soil and water resources can occur from existing roads and trails throughout the allotments. Roads and trails can contribute to increased surface runoff and accelerated erosion, especially where proper drainage is lacking. Other impacts such as vegetation treatments or weed treatments may also change water infiltration or runoff rates and affect soil and water resources. Natural gas development, which includes road construction/maintenance, pads and pipelines have both direct and indirect effects to soil and water resources. Based on the land management activities occurring across the allotments, it is assumed that cumulative effects to soils and water quality are minor, if proper best management practices are implemented.

Wildlife, Including Special Status Species. The area covered by the Proposed Action only comprises a small portion of the watershed. Many other land use activities (e.g., recreation, housing, road maintenance, oil and gas development) occur within the watershed. All of these activities have altered the amount of suitable and potentially suitable habitats for terrestrial wildlife species. Cumulatively, many of the future actions planned on private and other lands may have some undetermined effect on wildlife including special status species habitat. The Proposed Action would create negligible landscape-level cumulative impacts to wildlife when viewed in comparison with those activities currently occurring and reasonably certain to occur on adjacent private/other lands.

CONSULTATION.

The following stakeholders were contacted:

- Southern Ute Indian Tribe

- Ute Mountain Ute Tribe
- Uinta and Ouray Agency Ute Indian Tribe
- Grazing permittee

LIST OF PREPARERS.

Members of the CRVFO Interdisciplinary Team who participated in the impact analysis of the Proposed Action and alternative, development of appropriate mitigation measures, and preparation of this EA are listed in Table 16, along with their areas of responsibility.

Table 16. BLM Interdisciplinary Team Authors and Reviewers.

Name	Title	Areas of Participation
Isaac Pittman	Rangeland Management Specialist	NEPA Lead, Livestock Grazing
Kristy Wallner	Rangeland Management Specialist	Invasive, Non-Native Species (Noxious Weeds)
Carla DeYoung	Ecologist	Areas of Critical Environmental Concern; Special Status Plants; Vegetation; Wetlands and Riparian Zones; Land Health Standards
Kimberly Leitzinger	Outdoor Recreation Planner	Wilderness, Wild and Scenic Rivers, Recreation
Pauline Adams	Hydrologist	Soil, Water, Air, Geology, HazMat
Hilary Boyd	Wildlife Biologist	Terrestrial and Aquatic Wildlife (including Special Status Species), Migratory Birds
Erin Leifeld	Archeologist	Cultural Resources and Native American Religious Concerns
Brian Hopkins	Assistant Field Manager	NEPA Compliance

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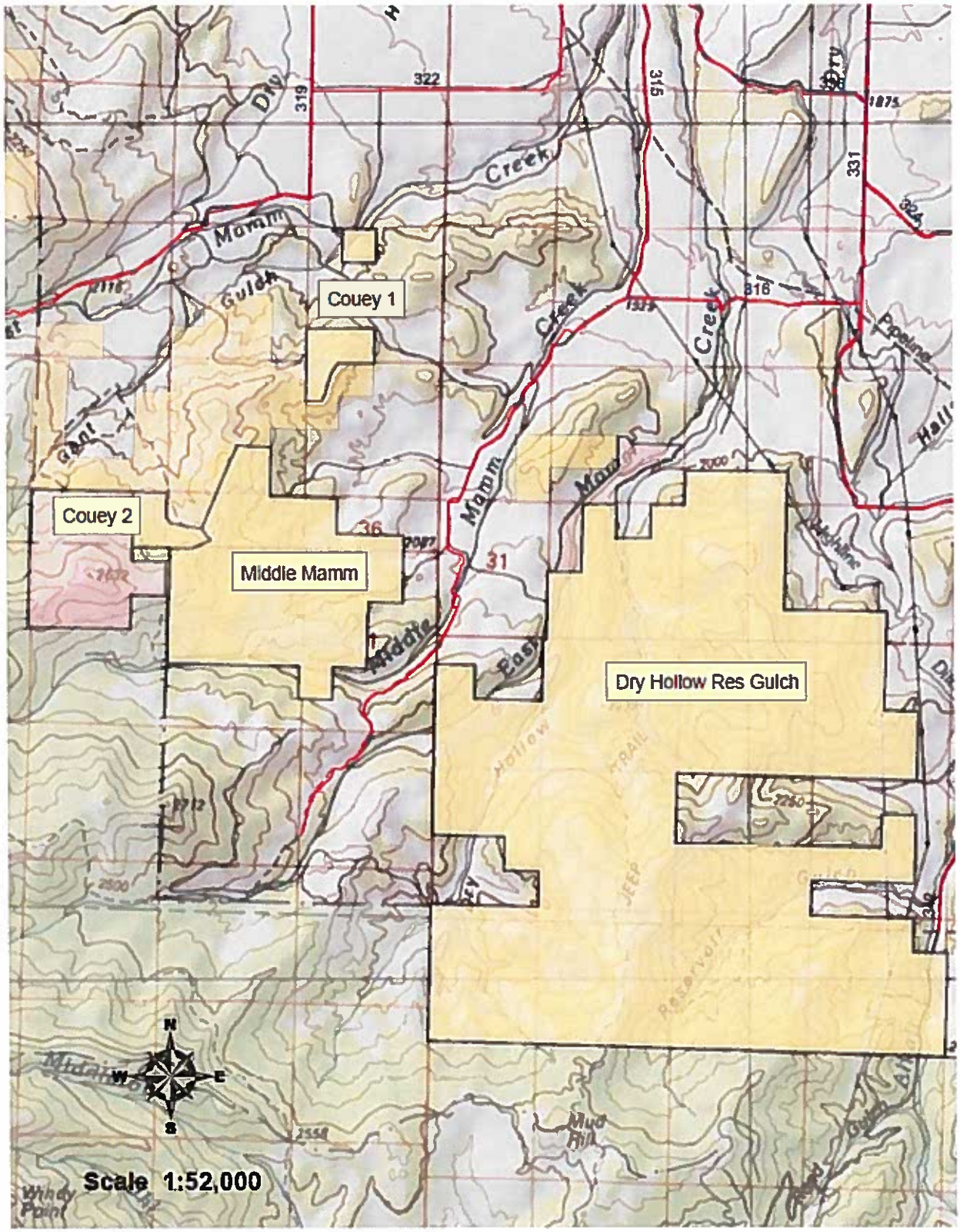
Appendix A – Map of Grazing Allotments Associated with the Proposed Action



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO RIVER VALLEY FIELD OFFICE
SILT, COLORADO

FINDING OF NO SIGNIFICANT IMPACT
for
DOI-BLM-N040-2016-0003-EA

Finding of No Significant Impact.

I have reviewed the direct, indirect and cumulative effects of the proposed action documented in the EA referenced above. The effects of the proposed action are disclosed in the Alternatives and Environmental Effects sections of the EA. Implementing regulations for NEPA (40 CFR 1508.27) provide criteria for determining the significance of the effects. Significant, as used in NEPA, requires consideration of both *context* and *intensity* as follows:

> (a) Context. This requirement means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short and long-term effects are relevant (40 CFR 1508.27):
>
> (b) Intensity. This requirement refers to the severity of the impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following are considered in evaluating intensity (40 CFR 1508.27).

1. Impacts that may be both beneficial and/or adverse.

> Impacts associated with issuing these livestock grazing permits are identified and discussed in the Affected Environment and Environmental Consequences sections of the EA. The proposed action will not have any significant beneficial or adverse impacts on the resources identified and described in the EA.

2. *The degree to which the proposed action affects health or safety.*

> The proposed activities will not significantly affect public health or safety. The purpose of the proposed action is to allow for multiple uses while maintaining or improving resource conditions to meet standards for rangeland health in the allotment. Similar actions have not significantly affected public health or safety.

3. *Unique characteristics of the geographic area such as prime and unique farmlands, caves, wild and scenic rivers, wilderness study areas, or ACECs.*

There are no unique characteristics in the area covered by the EA.

4. The degree to which the effects are likely to be highly controversial.

The possible effects of continued livestock grazing are not likely to be highly controversial.

5. The degree to which the effects are highly uncertain or involve unique or unknown risks.

The possible effects on the human environment are not highly uncertain nor do they involve unique or uncertain risks. The technical analyses conducted for the determination of the impacts to the resources are supportable with use of accepted techniques, reliable data, and professional judgment. Therefore, I conclude that there are no highly uncertain, unique, or unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration.

This EA is specific to the allotments described in the Proposed Action. It is not expected to set precedent for future actions with significant effects or represent a decision in principle about a future management consideration in or outside of these allotments.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The area covered by the Proposed Action only comprises a small portion of the watershed. Cumulatively, many of the future actions planned on private and other lands may have some undetermined effect on wildlife including special status species habitat. The proposed action would create negligible landscape-level cumulative impacts to wildlife when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent private/other lands.

8. The degree to which the action may adversely affect scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places.

Of the 28 cultural resources identified within the four allotments, 7 have been determined eligible or potentially eligible for the National Register of Historic Places. There is potential for additional cultural resources to be documented within the four allotments, specifically in areas with known historic activities or areas near water or other resources. Subsequent site field visits, inventory, and periodic monitoring may have to be done to identify if other historic properties are present as well as determine if there are impacts to these properties within the term of the permit and as funds are made available. If the BLM determines that grazing activities adversely impact the properties, mitigation will be identified and implemented in consultation with the Colorado SHPO. The EA discloses the adverse impacts that could occur to cultural resources from livestock grazing.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Properly managed livestock grazing (i.e. meeting land health standards) is generally compatible with threatened, endangered, and other special status species. As long as acceptable utilization levels are maintained and land health standards are achieved there would be no anticipated direct or indirect impact of grazing on special status plants or wildlife species.

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

The proposed action does not violate or threaten to violate any Federal, State, or local law or requirements imposed for the protection of the environment.

Based upon the review of the test for significance and the environmental analyses conducted, I have determined that the actions analyzed in the EA will not significantly affect the quality of the human environment. Accordingly, I have determined that the preparation of an Environmental Impact Statement is not necessary for this proposal.

SIGNATURE OF AUTHORIZED OFFICAL.

B R Hopkins — 2-26-16

Brian Hopkins
Assistant Field Manager
Colorado River Valley Field Office

Date

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Colorado River Valley Field Office
2300 River Frontage Road
Silt, CO 81652

IN REPLY REFER TO:
ON 0504797 or 0507662 (CON040)

NOTICE OF PROPOSED DECISION

Dear Grazing Permittee:

Introduction & Background.

Two grazing permits will expire this year on Feb 28, 2016. The expiration of these permits has initiated the process of reviewing all grazing use permitted on these allotments. The two grazing permits involved have undergone review for conformance with the land use plan and compliance with the National Environmental Policy Act (NEPA). The review and NEPA compliance has been completed as documented in the Environmental Assessment (EA) No. DOI-BLM-CO-N040-2016-0003. A copy of the EA is enclosed. Renewal of the lease has also been reviewed for compliance with 43 Code of Federal Regulations (CFR) 4110.1(b)(1) which requires a satisfactory record of performance prior to renewal.

Finding Of No Significant Impact (FONSI).

The environmental assessment, analyzing the environmental effects of the action, has been reviewed. The action with mitigation measures result in a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

Rationale: The analysis of the action with mitigation measures did not identify any impacts that would be significant in nature either in context or intensity. The grazing authorization allows for adequate plant growth recovery and promotes healthy rangelands as it relates to rangeland standards. In addition, there is nothing to indicate the action is highly controversial or that it is related to other actions with individually insignificant but cumulatively significant actions.

Proposed Decision.

As a result of this process, it is my proposed decision to renew grazing permit #0504797 for Couey Family LLP. and grazing permit #0507662 for Robert Wheeler for a period of 10 years (April 15, 2016 – April 14, 2026). My proposed decision results in the following authorized use and terms and conditions:

Table 1. Proposed Grazing Schedules.

Operator Name	Auth. No.	Allotment & Number	Pasture	Livestock No. & Kind	Begin Date	End Date	% BLM Land	AUMs
Couey Family LLLP.	0504797	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	268 Cattle	06/01	06/15	100	132
		Middle Mamm (08128)		112 Cattle	06/03	06/30	100	103
		Couey 1 (08115)		2 Cattle	05/01	05/31	100	2
		Couey 1 (08115)		2 Cattle	10/16	11/15	100	2
		Couey 2 (08118)		87 Cattle	06/20	10/19	5	17
Robert Wheeler	0507662	Dry Hollow Reservoir Gulch (08127)	Dry Hollow	90 Cattle	06/01	06/15	100	44

Table 2. Allotment Summary AUMS.

Operator Name	Auth. No.	Allotment & Number	Active AUMs	Suspended AUMs	Temporary Suspended AUMS	Permitted Use
Couey Family LLLP.	0504797	Dry Hollow Reservoir Gulch (08127)	132	0	229	361
		Middle Mamm (08128)	103	0	0	103
		Couey 1 (08115)	4	0	0	4
		Couey 2 (08118)	17	0	0	17
Robert Wheeler	0507662	Dry Hollow Reservoir Gulch (08127)	44	0	0	44

Terms and Conditions.

1. An actual use report shall be submitted annually to the BLM office no later than 15 days after livestock have been removed (i.e. the grazing end period on the bill or permit/lease).

2. Adaptive management will be employed on the allotments. The BLM will allow up to 14 days of flexibility in the start and end dates on this permit depending on range readiness. Livestock use different than that shown above must be applied for in advance.

3. Maintenance of range improvements is required and shall be in accordance with all approved cooperative agreements and range improvement permits/leases. Maintenance shall be completed prior to turnout. Maintenance activities shall be restricted to the footprint (previously disturbed area) of the project as it existed when it was initially constructed. The Bureau of Land Management shall be given 48 hours advance notice of any maintenance work that will involve heavy equipment. Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site.

4. The permittee/lessees and all persons associated with grazing operations must be informed that any person who injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law. If in connection with allotment operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until further notified in writing to proceed by the authorized officer.

5. As provided by the 2015 Colorado River Valley Field Office Record of Decision and Approved Resource Management Plan, all public motorized and mechanized travel is limited to designated routes. Grazing permittees will maintain Administrative Access specifically for livestock operations and maintenance activities, as follows: 1. motorized access on designated routes that are closed to public motorized use; 2. motorized access in areas seasonally closed to public motorized use; and 3. motorized access off designated routes (e.g., fence maintenance). Administrative access is valid for grazing administration only and not for other purposes such as four-wheeling or big game hunting.

6. Upland average utilization levels by livestock should not exceed 40% on key grass species during the critical growth period and 50% during the dormant season. Grazing in riparian areas should leave an average minimum 4-inch stubble height on key species at the end of the grazing period and utilization should be no more than 30% use of current year's growth on woody species. If utilization is approaching allowable use levels, livestock should be moved to another portion of the allotment, or removed from the allotment entirely for the remainder of the growing season. Application of this term may be flexible to recognize livestock management that includes sufficient opportunity for regrowth, spring growth prior to grazing, or growing season deferment.

7. Salt/mineral block and supplemental feed will be placed a minimum of 0.25 mile and preferably 0.5 mile from riparian areas and other water sources, including springs.

8. For permit number 0504797, the 229 AUMs on the Dry Hollow Reservoir Gulch Allotment are placed into temporary suspension until an AMP can be developed that would improve fencing and water availability on the north east portion of the allotment were cattle could be adequately managed and land health standards can still be met.

Rationale for the Proposed Decision.

Renewal of the grazing permit/lease is in conformance with the Colorado River Valley Field Office Record of Decision (ROD) and Approved Resource Management Plan (RMP), approved June. 2015.

The Proposed Action helps to achieve the goal of the plan by applying flexible and sustainable livestock grazing, in accordance with BLM Colorado Standards for Public Land Health and Guidelines for Livestock Grazing Management to contribute to local economies, ranching livelihoods, and the rural western character integral to many communities. It also achieves the objective of the plan by meeting the forage demands of livestock operations based on active use, by providing approximately 441,600 acres for livestock grazing, and provide approximately 35,500 AUMs of livestock forage.

An interdisciplinary team prepared an EA (No. DOI-BLM-CO-N040-2016-0003) for the proposed grazing permit/lease renewal. My proposed decision is based on the findings of the analyses contained in the EA. The analysis of the proposed action indicated that the current conditions and land health standards in the Dry Hollow Reservoir Gulch, Middle Mamm, Couey 1 and Couey 2 Allotments are expected to be maintained or improved. The grazing use proposed allows for adequate plant growth recovery and promotes healthy rangelands as it relates to rangeland standards.

Terms and conditions have been included to mitigate potential impacts from grazing use and to authorize flexibility in the permit.

Authority.

43 CFR 4100.0-8 states: "The authorized officer shall manage livestock grazing on public lands under the principle of multiple use and sustained yield, and in accordance with applicable land use plans. Land use plans shall establish allowable resource uses (either singly or in combination), related levels of production or use to be maintained, areas of use, and resource condition goals and objectives to be obtained. The plans also set forth program constraints and general management practices needed to achieve management objectives. Livestock grazing activities and management actions approved by the authorized officer shall be in conformance with the land use plan as defined at 43 CFR 1601.0- 5(b)."

43 CFR 4110.2-2(a) states: "Permitted use is granted to holders of grazing preference and shall be specified in all grazing permits or leases. Permitted use shall encompass all authorized use

including livestock use, any suspended use, and conservation use, except for permits and leases for designated ephemeral rangelands where livestock use is authorized based upon forage availability, or designated annual rangelands. Permitted livestock use shall be based upon the amount of forage available for livestock grazing as established in the land use plan, activity plan or decision of the authorized officer under § 4110.3-3, except, in the case of designated ephemeral or annual rangelands, a land use plan or activity plan may alternatively prescribe vegetation standards to be met in the use of such rangelands."

43 CFR 4130.2(a) states: "Grazing permits or leases authorize use on the public lands and other BLM-administered lands that are designated in land use plans as available for livestock grazing. Permits and leases will specify the grazing preference, including active and suspended use. These grazing permits and leases will also specify terms and conditions pursuant to §§4130.3, 4130.3-1, and 4130.3-2."

43 CFR 4130.2(d) states: "The term of the grazing permits or leases authorizing livestock on the public lands and other lands under the administration of the Bureau of Land Management shall be 10 years unless -- (1) The land is being considered for disposal; (2) The land will be devoted to a public purpose which precludes grazing prior to the end of 10 years; (3) The term of the base property lease is less than 10 years, in which case the term of the Federal permit or lease shall coincide with the term of the base property lease; or (4) the authorized officer determines that a permit or lease for less than 10 years is the best interest of sound land management."

43 CFR 4130.3 states: "Livestock grazing permits and leases shall contain terms and conditions determined by the authorized officer to be appropriate to achieve the management and resource condition objectives for the public lands and other lands administered by the Bureau of Land Management, and to ensure conformance with the provisions of subpart 4180 of this part."

43 CFR 4130.3-1(a) states: "The authorized officer shall specify the kind and number of livestock, the period(s) of use, the allotment(s) to be used, and the amount of use, in animal unit months, for every grazing permit or lease. The authorized livestock grazing use shall not exceed the livestock carrying capacity of the allotment."

43 CFR 4130.3-2 states: "The authorized officer may specify in grazing permits or leases other terms and conditions which will assist in achieving management objectives, provide for proper range management or assist in the orderly administration of the public rangelands."

43 CFR 4160.1(a) states: "Proposed decisions shall be served on any affected applicant, permittee or lessee and any agent and lien holder of record, who is affected by the proposed actions, terms or conditions, or modifications relating to applications, permits and agreements (including range improvement permits) or leases, by certified mail or personal delivery. Copies of the proposed decisions shall also be sent to the interested public".

Protest and/or Appeal.

Any applicant, permittee, lessee or other interested publics may protest a proposed decision under Sec. 43 CFR 4160.1 and 4160.2, in person or in writing to Brian Hopkins, Assistant Field Manager, Bureau of Land Management, 2300 River Frontage Road, Silt, Colorado 81652 within

15 days after receipt of such decision. The protest, if filed, should clearly and concisely state the reason(s) as to why the proposed decision is in error.

In accordance with 43 CFR 4160.3 (a), in the absence of a protest, the proposed decision will become the final decision of the authorized officer without further notice unless otherwise provided in the proposed decision.

In accordance with 43 CFR 4160.3 (b) upon a timely filing of a protest, after a review of protests received and other information pertinent to the case, the authorized officer shall issue a final decision.

Any applicant, permittee, lessee or other person whose interest is adversely affected by the final decision may file an appeal in accordance with 43 CFR 4.470 and 43 CFR 4160.3 and 4160 .4. The appeal must be filed within 30 days following receipt of the final decision, or within 30 days after the date the proposed decision becomes final. The appeal may be accompanied by a petition for a stay of the decision in accordance with 43 CFR 4.471 and 4.479, pending final determination on appeal. The appeal and petition for a stay must be filed in the office of the

authorized officer, as noted above. The person/party must also serve a copy of the appeal on any person named [43 CFR 4.421(h)] in the decision and the Office of the Solicitor, United States Department of Interior, 755 Parfet Street, Suite 151, Lakewood, Colorado 80215. The BLM does not accept appeals by facsimile or email.

The appeal shall state the reasons, clearly and concisely, why the appellant thinks the final decision is in error and otherwise complies with the provisions of 43 CFR 4.470.

Should you wish to file a petition for a stay, see 43 CFR 4.471 (a) and (b). In accordance with 43 CFR 4.471(c), a petition for a stay must show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied.

(2) The likelihood of the appellant's success on the merits.

(3) The likelihood of immediate and irreparable harm if the stay is not granted, and

(4) Whether the public interest favors granting the stay.

As noted above, the petition for stay must be filed in the office of the authorized officer and serviced in accordance with 43 CFR 4.473. Any person named in the decision from which an appeal is taken (other than the appellant) who wishes to file a response to the petition for a stay may file with the Hearings division a motion to intervene in the appeal, together with the response, within 10 days after receiving the petition. Within 15 days after filing the motion to intervene and response, the person must serve copies on the appellant, the office of the Solicitor and any other person named in the decision (43 CFR 4.472(b)).

Please take a moment to review your enclosed grazing lease. **If you do not have any concerns with the lease as offered, please sign, date, and return both copies to our office.** If you have any questions, contact Isaac Pittman of my range staff at (970) 876-9069.

Sincerely,

B R Hop 2-26-16

Brian Hopkins, Date
Assistant Field Manager
Colorado River Valley Field Office

Enclosure(s):
Environmental Assessment (No. DOI-BLM-CO-040-2016-0003)
BLM Form 4130-2a (Grazing permit)

CC: Couey Family LLLP
c/o Kelly Couey
6275 County Road 315
Silt, CO 81652

Certified Mail 7014 2120 0001 7991 9331

Robert Wheeler
8544 County Road 315
Silt, CO 81652

Certified Mail 7014 2120 0001 7991 9348